

Superfund Records Center
SITE: SUTTON BROOK
BREAK: 11.09
OTHER: 18776

I

1LOCUT-5726

1LOCUT 5726

CASTROL INDUSTRIAL INC.

FIRE

MATERIAL SAFETY DATA SHEET

HEALTH 1 0 REACTIVITY

Emergency Phone No.: (708) 241-4000
Information Phone No.: (708) 241-40000
SPECIAL

I. MATERIAL IDENTIFICATION

PRODUCT TRADE NAME: 1LOCUT** 5726

MANUFACTURER: CASTROL INDUSTRIAL INC.

ADDRESS: 1001 WEST 31ST STREET DOWNERS GROVE IL, 60515-1280

MFG. FACILITY ADDRESS:

Preparer: Ricardo Simmons

Preparation Date: 08/30/1993

II. HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENTS	%	CAS No.	TLV (ACGIH)	PEL (OSHA)
Distillates (petroleum), hydrotreated light naphthenic	60-65	64742-53-6	5 mg/M3 (mist)	5 mg/M3 (mist)
Distillates (petroleum), hydrotreated heavy naphthenic	25-30	64742-52-5	5 mg/M3 (mist)	5 mg/M3 (mist)

Contains no other ingredients now known to be hazardous as defined by OSHA 29 CFR 1910.1000 (subpart z) and OSHA CFR 29 1910.1200.

III. PHYSICAL PROPERTIES

APPEARANCE & ODOR: Dark brown liquid				
BOILING POINT °F (°C): NA	NA			
MELTING POINT °F (°C): NA	NA			
SPECIFIC GRAVITY (H2O=1): 0.920				
VAPOR PRESSURE: NA				
VAPOR DENSITY (AIR=1): NA				
EVAPORATION RATE (BUTYL ACETATE=1): < 1				
%VOLATILES BY VOLUME: NA				
VOC: 000.00 g/L 00.000 lbs/gallon	VOC not yet determined for this product.			
SOLUBILITY IN H2O: Insoluble				
pH AS IS: NA				
pH (DILUTE): NA	a 0 %			

IV. FIRE AND EXPLOSION HAZARDS

FLASHPOINT (method used)
325 °F 162.76 °C COC
FLAMMABLE LIMITS
LEL NA UEL NA
EXTINGUISHING MEDIA:
carbon dioxide, dry chemical, foam.

SPECIAL FIRE FIGHTING PROCEDURES:

Wear self contained breathing apparatus when fire fighting in a confined space. Cool fire exposed containers with waterspray to prevent rupture.

UNUSUAL FIRE & EXPLOSION HAZARDS:

None known.

CONTAINER HANDLING: DO NOT CUT OR WELD EMPTY DRUMS UNLESS THOROUGHLY CLEANED.

MSDS NUMBER: 5726

REVISED: 08/30/1993

** Registered in the U.S. Patent & Trademark Office

V. REACTIVITY DATA

STABILITY: Stable under normal conditions

CONDITIONS TO AVOID: None known

INCOMPATIBILITIES: Strong oxidizing agents

HAZARDOUS DECOMPOSITION: Potential combustion products are oxides of carbon and sulfur.

HAZARDOUS POLYMERIZATION: Will Not Polymerize

VI. HEALTH HAZARD SUMMARY

ROUTES OF EXPOSURE AND EFFECTS OF OVEREXPOSURE

EYES:

May cause eye irritation.

SKIN ABSORPTION:

No acute effects expected.

SKIN CONTACT:

May cause skin irritation.

INHALATION:

Mists may cause respiratory irritation.

INGESTION:

Oral LD50 not established. Do not ingest.

CHRONIC EFFECTS:

Prolonged or repeated contact with petroleum oil may remove natural oils and fats from the skin.

THRESHOLD LIMIT VALUE: Not established for product

CONTAINS KNOWN CARCINOGENS: no NTP: no IARC: no OSHA: no

EMERGENCY AND FIRST AID PROCEDURES

EYES:

In case of contact, flush eyes with plenty of water. Get medical attention if irritation persists.

SKIN:

Wash skin with soap and water. If irritation occurs, get medical attention. Wash clothing before reuse.

INHALATION:

If respiratory discomfort or irritation occurs, move the person to fresh air. See a doctor if discomfort or irritation continues.

INGESTION:

Do not induce vomiting; get medical attention immediately.

MSDS NUMBER: 5726

REVISED: 08/30/1993

VII. CONTROL MEASURES

RESPIRATORY PROTECTION:

Used industrial hygiene practices recommend that engineering controls be used to reduce any airborne concentrations to the threshold limit value (TLV) or permissible exposure limit (PEL). If any associated TLV or PEL is exceeded, provide NIOSH approved respiratory protection.

GLOVES:

Impervious gloves such as rubber should be used when handling this product.

EYE PROTECTION:

Safety glasses with side shield or chemical goggles.

OTHER:

Eyewash facility. Appropriate clothing to avoid skin contact.

VIII. PRECAUTIONS

CONTAINMENT PROCEDURES:

Recover free liquid. Keep product out of streams and waterways by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses or extensive land areas.

WASTE DISPOSAL PROCEDURES:

Dispose of in accordance with local, state and federal regulations. Disposal of this material to the land may be banned by federal law (40 CFR 268).

STORAGE AND HANDLING PROCEDURES:

Avoid contact with skin and eyes. Avoid breathing mists. Do not take internally. Keep container closed when not in use. Bring product to room temperature before use. Do not store near heat, flame or strong oxidizing agents.

RCRA HAZARDOUS WASTE DESIGNATION:

This material is regulated as used oil by the EPA. Under the Used Oil Management Standards (40 CFR 279) effective 3/8/93, EPA presumes used oil will be recycled. If it is, no characteristic determination is required provided all parties handling the used oil comply with part 279. These management standards apply to used oil until it is disposed of or sent for disposal. Individual state regulations may differ from the federal regulations. Refer to applicable state & local regulations for proper handling procedures.

CERCLA REPORTABLE QUANTITY:

This product does not contain any CERCLA regulated materials.

IX. OTHER HAZARD INFORMATION

PETROLEUM OIL: STEL = 10 mg/M3. Using terminology of the International Agency for Research on Cancer (IARC), the petroleum distillates listed in Section II are classified by the supplier as severely processed. Not all those listed in Section II may be present. The supplier has stated that these distillates do not require a carcinogen label as defined by OSHA 29 CFR 1910.1200.

X. ADDITIONAL REGULATORY INFORMATION

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)

29 CFR 1910.1200 Hazardous Chemical: yes

SUPERFUND AMENDMENT AND REAUTHORIZATION ACT OF 1986 (SARA)

Section 302, Extremely Hazardous Substance: no

Section 311, Hazardous Chemical: yes

Immediate: yes Delayed: yes Fire: no Sudden Release: no Reactive: no

Section 313, Toxic Chemical: no

TOXIC SUBSTANCES CONTROL ACT (TSCA)

This product is a mixture and is NOT listed in the TSCA Inventory. The individual ingredients in the product are listed in the TSCA Inventory.

DEPARTMENT OF TRANSPORTATION (DOT)

PROPER SHIPPING NAME : NOT REGULATED (IN CONTAINERS < 3500 GALLONS)

HAZARD CLASS (49 CFR 172.101): NA (IN CONTAINERS < 3500 GALLONS)

HAZARD ID NUMBER: NA (IN CONTAINERS < 3500 GALLONS)

FREIGHT CLASS

WMFC 155250, PETROLEUM OILS, GREASES & RELATED PRODUCTS, NOT CLASS 65

DISCLAIMER

Information presented herein has been compiled from information provided to us by our suppliers and other sources considered to be dependable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. Nothing herein is to be construed as recommending any practice or the use of any product in violation of any patent or in violation of any law or regulation. It is the users' responsibility to determine the suitability of any material for a specific purpose and to adopt such safety precautions as may be necessary. We make no warranty as to the results to be obtained in using any material and since conditions of use are not under our control, we must necessarily disclaim all liability with respect to the use of any material supplied by us.

MSDS NUMBER: 5726

REVISED: 08/30/1993



Castrol North America

Castrol Industrial Inc

1001 West 31st Street
Downers Grove IL 60515

Telephone (708) 241 4000
Fax (708) 241 1957

June 24, 1994

*File
MSDS*

ATTENTION: Health & Safety Director

IMPORTANT INFORMATION

In compliance with state Right-To-Know (RTK) laws, and the OSHA's Hazard Communication Standard which became effective November 25, 1985, we are providing you with a current Material Safety Data Sheet (MSDS) for product (s) received by your company for the first time.

In the event it becomes necessary for us to update an MSDS to reflect changes affecting the health hazard information or changes in regulations, we will provide you with a copy of the updated form.

Please check applicable state/federal regulations for information on your responsibility for retention and availability of these forms. INASMUCH AS THIS IS THE ONLY COPY OF THIS FORM THAT WILL BE SENT TO YOUR COMPANY, WE ASK THAT YOU PROVIDE INTERNAL COPIES AS NEEDED.

If you have any questions, please contact me at 800/621-2661 (in Illinois at (708) 241-4000).

Sincerely

Wenona Johnson

Wenona Johnson
Regulatory Affairs Coordinator

wj

TRW-01340

U.S. DEPARTMENT OF LABOR

Form No. LSH-OOS-4
May 1969

WAGE AND LABOR STANDARDS ADMINISTRATION
Bureau of Labor Standards

MATERIAL SAFETY DATA SHEET

SECTION I	
MANUFACTURER'S NAME HARRY MILLER CORP.	EMERGENCY TELEPHONE NO. 215-324-4000
ADDRESS (Number, Street, City, State, and ZIP Code) 4 th & Bristol Sts. , Phila., Pa., 19140	
CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS IMMUCLENE EXTRA
CHEMICAL FAMILY Sodium nitrite, Fatty Alkanolamides, & Glycol	FORMULA

SECTION II HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST NONE			ALLOYS NONE		
VEHICLE OF			METALLIC COATINGS OF		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES THESE			OTHERS THESE		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
sodium nitrite approx				5	180 mg/kg rat

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)	214°F	SPECIFIC GRAVITY (H ₂ O=1)	1.03
VAPOR PRESSURE (mm Hg.)	approx same as water	PERCENT VOLATILE BY VOLUME (%)	54%
VAPOR DENSITY (AIR=1)		EVAPORATION RATE (water =1)	1
SOLUBILITY IN WATER	complete		
APPEARANCE AND ODOR	Light yellow , clear , liquid		

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	FLAMMABLE LIMITS	LeI	UeI
not applicable			
EXTINGUISHING MEDIA			
SPECIAL FIRE FIGHTING PROCEDURES			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
none			

TRW-01341

THRESHOLD LIMIT VALUE	no hazardous maximum concentration
EFFECTS OF OVEREXPOSURE	none
EMERGENCY AND FIRST AID PROCEDURES	
antidote in case of swallowing; gastric lavage with 1:5000 sol'n of potassium permanganate	

SECTION VI. REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
strong mineral acids			
HAZARDOUS DECOMPOSITION PRODUCTS			
oxides of nitrogen			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII. SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
flush area well with water	
WASTE DISPOSAL METHOD	
secondary sewage treatment	

SECTION VIII. SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type)			
VENTILATION	LOCAL EXHAUST	SPECIAL	
	MECHANICAL (General)	OTHER	
PROTECTIVE GLOVES		EYE PROTECTION	
when handling concentrate		safety glasses to avoid splashes	
OTHER PROTECTIVE EQUIPMENT			

SECTION IX. SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
no special precautions;	
product freezes at 10°F, but will not separate upon remelting	
OTHER PRECAUTIONS	



HARRY MILLER CORP.

ORIGINAL CHEMICAL SPECIALTIES SINCE 1936

4th and BRISTOL STREETS . PHILADELPHIA, PA. 19140 . DA 4-4000

TECHNICAL DATA

IMMUCLENE EXTRA

APPEARANCE

Clear, medium body, amber liquid.

CHARACTERISTICS

Is odorless. Has pH of 9.2 which is slightly alkaline, Dissolves instantly in any kind of water, to make a clear solution. Is condensate type detergent, wetting agent and rust eliminator, Will withstand boiling temperatures without clouding or separation. Leaves invisible protective coating that will prevent rust formation. Contains no mineral oil.

USE

As a detergent, wetting agent and rust eliminator for cleaning and protecting most ferrous metals against rust. Not suitable for use on cast iron and cast steel.

METHOD OF APPLICATION

In many cases where mineral or chlorinated solvents like Stoddard Solvent, Naphtha, Gasoline, Carbon Tetrachloride, Trichlorethylene, etc. are now used to remove cutting oils, quenching or tempering salts, etc. from ferrous metal parts by solvent action (other than condensing vapors), IMMUNOL EXTRA water solution can be used to remove these materials more readily. In most cases (depending on the material to be removed) this can be accomplished by using from 2 to 6 ounces IMMUNOL EXTRA per gallon of water - in a cold or normal temperature bath. Some conditions will require heating of the IMMUNOL solutions from normal temperature up to boiling. In each case the cleaning time cycle will have to be determined.

Where IMMUNOL EXTRA is found to do a satisfactory job of cleaning, the metal (other than cast iron or cast steel) will contain an invisible film of protective coating which will prevent subsequent corrosion as long as the film remains on the metal. In some cases painting or lacquering can be applied over the IMMUNOL film without removing.

U.S. DEPARTMENT OF LABOR
OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
MATERIAL SAFETY DATA SHEET

Dept 711

SECTION I			
MANUFACTURER'S NAME HARRY MILLER CORPORATION		EMERGENCY TELEPHONE NO. (215) 324-4000	
ADDRESS (Number, Street, City, State and ZIP Code) 4th & BRISTOL STREETS, PHILADELPHIA, PA 19140			
CHEMICAL NAME AND SYNONYMS		TRADE NAME AND SYNONYMS IMMUNOL EXTRA J	
CHEMICAL FAMILY Mixture-alkanolamide, amide, hexylene glycol, water		FORMULA	
SECTION II HAZARDOUS INGREDIENTS			
		%	TLV (UNITS)
This product does not contain any substances listed as hazardous in Hazard Communication Standard (CFR 1910.1200).			
SECTION III PHYSICAL DATA			
BOILING RANGE	214°F	SPECIFIC GRAVITY (H ₂ O=1)	1.034
VAPOR PRESSURE (mm Hg.) 20°C	17.5	PERCENT VOLATILE BY VOLUME (%)	60-70
VAPOR DENSITY (AIR=1)	>1	EVAPORATION RATE (ether = 1)	<1
SOLUBILITY IN WATER	complete		
APPEARANCE AND ODOR Light yellow, mild odor			
SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method Used) N/A (water based)	FLAMMABLE OR EXPLOSIVE LIMITS (PERCENT BY VOLUME IN AIR)	LOWER LIMIT N/A	UPPER LIMIT N/A
EXTINGUISHING MEDIA Not required			
SPECIAL FIRE FIGHTING PROCEDURES Not required			
UNUSUAL FIRE AND EXPLOSION HAZARDS			
None			

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE
Unknown for mixture

EFFECTS OF OVEREXPOSURE

CAUTION! MILDLY ALKALINE

May cause irritation to skin and eyes.

PRECAUTIONS EYE IRRITANT

Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling

EMERGENCY AND FIRST AID PROCEDURES

Eye Contact: Flush promptly with water for at least 15 minutes. Call a physician.
 Skin Contact: Wash promptly with soap and water.
 Ingestion: Call a physician promptly. Do not induce vomiting. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	N/A

INCOMPATIBILITY (Materials to avoid)~~Strong Oxidants, e.g.: liquid chlorine, concentrated oxygen, hypochlorites.~~**HAZARDOUS DECOMPOSITION PRODUCTS**

None

HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	N/A

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush with water

WASTE DISPOSAL METHOD

Polymer chemical treatment, ultra-filtration, or high temperature incineration.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Not required

VENTILATION

Not required

PROTECTIVE GLOVES

Not required

EYE PROTECTION

Safety glasses

OTHER PROTECTIVE EQUIPMENT

N/A

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING & STORING

Normal drum storage

OTHER PRECAUTIONS

Empty Container Warnings: Since containers contain product residue, observe all label precautions after container is empty. Do not cut, drill, grind or weld on or near this container. Do not reuse unless thoroughly cleaned.

FOR ADDITIONAL INFORMATION ON HEALTH EFFECTS CONTACT:

Director of Industrial Hygiene
(216) 324-4000

0908-2717

TRW-01345

MATERIAL SAFETY DATA SHEET

NICKEL ANODES

711

The purpose of this data sheet is to obtain technical information for each specific material from the manufacturer. This information is required to evaluate health, safety and environmental hazards, determine precautions and make final recommendations for use of the material. The information requested will be kept confidential and disclosed only as necessary to meet requirements of the Occupational Safety and Health Act of 1970 or as required by any other Federal, State or Local regulations.

SECTION I	
MANUFACTURER'S NAME Inco Ltd.	EMERGENCY TELEPHONE NO. (212) 742-4000
ADDRESS (Number, Street, City, State, and ZIP Code) One New York Plaza, N.Y., N.Y.	
CHEMICAL NAME AND SYNONYMS Nickel	TRADE NAME AND SYNONYMS Inco S Electrolytic Nickel
CHEMICAL FAMILY Metals	FORMULA Ni

SECTION II - HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
Pigments			Base Metal Nickel	98.7	1mg/m ³
Catalyst			Alloys		
Vehicle			Metallic Coatings		
Solvents			Filler Metal Plus Coating or Core Flux		
Additives			Others Cobalt	1.2	1mg/m ³
Others					
HAZARDOUS MIXTURES OF OTHER SOLVENTS				%	TLV (Units)
NOT APPLICABLE					

SECTION III - PHYSICAL DATA			
Boiling Point (°F)	2900° C	Specific Gravity (H ₂ O = 1)	8.90
Vapor Pressure (mm Hg.)	N.A.	Percent Volatile by Volume (%)	N.A.
Vapor Density (Air = 1)	N.A.	Evaporation Rate (_____ = 1)	N.A.
Solubility in Water	NEGGLIGIBLE		
Appearance and Odor Silver-Grey Metal Disc Approx. 1" Diam, Odorless			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA			
Flash Point (Method used)	Flammable Limits	LEL	UEL
Extinguishing Media			
Special Fire Fighting Procedures			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

SECTION V - HEALTH HAZARD DATA	
Threshold Limit Value	1mg per cu Meter of air (as Ni) in fumes or respirable particles.
Effects of Overexposure	No acute respiratory reaction or conclusive chronic effects from exposure to nickel metal have been observed, but proper industrial hygiene requires maintenance of working atmosphere at concentrations below the recommended TLV.
Emergency and First Aid Procedures	Remove to Fresh Air

SECTION VI - REACTIVITY DATA			
Stability	Unstable		Conditions to Avoid
	Stable	X	
Incompatibility (Materials to avoid) Reacts with Mineral Acids to liberate hydrogen.			
Hazardous Decomposition Products Evolved hydrogen may become explosion hazard			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
Steps to be Taken in Case Material is Released or Spilled If S Electrolytic Nickel is spilled it can be safely swept, shoveled, picked up by hand or magnet and returned to original container.	

SECTION VIII - SPECIAL PROTECTION INFORMATION	
Good industrial hygiene practice requires that employee exposure be maintained below the recommended TLV. This is preferably achieved through the provision of adequate ventilation where necessary. Where dust or fume cannot be controlled in this way, personal respiratory protection should be employed.	
RESPIRATORY PROTECTION: Not required when using S Electrolytic nickel as anode material for plating nickel.	
VENTILATION: The area surrounding any plating tank should be suitably ventilated to prevent gases, mists and particulate matter evolved from the plating tank from collecting to injurious levels.	
PROTECTIVE GLOVES: Gloves are advisable in handling S nickel rounds to avoid cuts and abrasions.	
EYE PROTECTION: Advisable around any plating tank but not specifically necessary because nickel is being plated.	

SECTION IX - SPECIAL PRECAUTIONS	
Precautions to be Taken in Handling and Storing	
Other Precautions	
<div style="border: 2px solid black; padding: 5px; transform: rotate(-5deg); display: inline-block;"> NONE REQUIRED </div>	

0908-2719

TRW-01347



AMAX

INDUSTRIAL PRODUCTS DIVISION

Serving America's Paper Mills, Factories and Mines Since 1959!



To.....Dolores

800-662-0023

Thank you for your inquiry!

I have enclosed the information you requested on IndustraSolv, the safe, general purpose degreaser for cleaning equipment and concrete floors. We are AMAX Corporation. A manufacturer serving America's papermills, factories, mines and utilities.

IndustraSolv

Algaecide	Will remove grease, latex, carbon, ink, glue, wax, pitch, resin, caked on mineral and orater residue, lube oil, coolants and even oil stains from concrete floors.
Aluminum Brightener	
Aluminum Hood Degreaser	This will clean metal stamping machines, compressors, pumps and presses, without removing paint!
Asbestos Removal	
Carbon Stripper	
Chemical Resistant Sealer	Great for parts tank, floor scrubbers, ultrasonic, steam jenny, pressure gun or manual wipe use. Non-caustic. Fireproof. Biodegradeable. EPA Registered.
Concrete Floor Cleaner	
Cutting Oil	
Dryer Frame Cleaner	
Epoxy Paint	Perfect for removing thick, burnt oil and encrusted carbon from machine framing and equipment, gear motors and couplings, vehicles, drip pans, shop floors, wheels, pedestal bases, structural steel, fork trucks, equipment, concrete slabs, metal gratings and vents, hand rails, piping, gear drives, cabinets and small parts.
Fertilizer	
Floor Wax	
Gear Case Cleaner	
Citrus Based Cleaners	Used straight this will remove tire marks, ink, oil and rust stains from concrete floors!
Graffiti Stripper	
Hand Cleaner	
Hot Melt Glue Stripper	IndustraSolv is authorized by the USDA for use in Federal inspected meat packaging and poultry plants.
Ice Melt	A perfect substitute for kerosene, methylene chloride, naptha, muriatic acid or trichlor 1,1,1.
Kerosene Substitute	
Lubricant	
Pitch and Resin Stripper	AMAX Corporation has 7 distribution centers across the country, to guarantee immediate delivery. A nationwide toll-free "800" number and a highly trained sales/service department for answering all your technical questions.
Rust Remover	
Safety Solvent	
Sanitizer	
Street and Highway Paint	IndustraSolv....safe, economical, efficient, concentrated.
Waterproof Concrete Patch	
Weed Killer	Sincerely,

Glenn R. Hille
Chemical Engineer

P.S. This will remove sludge build-up from sumps and cooling tanks.

Corporate Headquarters: 980 South Third Street • Louisville, Kentucky 40203 / 13333 Bell-Red Road • Bellevue, Washington 98008
Chicago, IL / Louisville, KY / New York, NY / Norwalk, CT / San Carlos, CA / South Plainfield, NJ / Tampa, FL / Montreal, PQ / Dallas, TX

0908-2720

TRW-01348

Material Safety Data Sheet for coatings, resins and other industrial related materials. Complies with Food and Drug Administration Act and complies with 29CFR 1910.1200 The Hazard Communication Standard

Preparation: 01/05/93 Emergency Phone No: 1800-662-0023 |
Manufacturers Name: AMAX Corporation Industrial Products Group
Corporate Street Address: 960 S Third Street
City: Louisville State: Kentucky Zip: 40203
Preparers Ident: Sam Donalds Dept. Code: 3436
Emergency and Information Phone Number: 1-800-662-0023

Section 1-Product Identification

Product Name: IndustraSolv Product Code No: 30114
Product Class: water-soluble, biodegradeable, kerosene subs.
Product Description and Uses: A water-soluble degreaser that will strip rubber, lube oil, grease, minerals, coal, ink, carbon, waxes, chemical residue and light tar. Will not strip machine paint or decals.
Fireproof and non-toxic. Substitute for kerosene, diesel fuel, mineral spirits and trichlor. Contains no chlorinated or hazardous solvents.
Safe for all metals and plastic. Great for removing grease deposits or oil stains from concrete floor. This will clean bearings, valves, scrapers, haul units, gear reducers, pumps, dies, lathes, presses, engines, transmissions, chains, fan housings and turbines.
Designed with safety in mind! Hard working and safe!

Section 2- Non-Hazardous Ingredients

Ingredient	CAS No.	%by wt.	Occupational Exposure limits		Vapor
			PEL	PPM	Pressure @68F
Sodium Hydroxide	1310-73-2	5.0%	2MG/M3		NA
2-Butoxyethanol	111-76-2	3.0%	50	25	NA
Sodium Metasilicate	6894-92-0	1.0%	NA		NA
Sodium Carbonate	497-19-8	1.0%	NA		NA
Nonionic Surfactant	9016-45-9	2.2%	NA		NA
Amine Oxide	71486-82-3	0.7%	NA		NA
Dyes		trace	NA		NA

NA=Not Applicable NK=Not Known NE=Not Established

Section 3- Physical Data

Boiling Point: 252F Vapor density: heavier_X lighter than air.
Ph: 11
Evaporation Rate: Faster_XX Slower than Ether.
Percent Volatile by Volume: 0% Weight per gallon: 9.3lbs
Appearance and Odor:
Red liquid with slight odor.

HMIS Rating Information:

Health: 1 Flammability: 0 Reactivity: 0 Personal Protection: A

Section 4-Fire and Explosion Hazard Data

Flammability Classification: OSHA None
DOT: Not Regulated Flash point: NONE LEL: NA
Extinguishing Method: None Required
Unusual Fire and Explosion Hazards: None Required
Special Fire Fighting Procedures: Water, CO2, dry chemical.

Section 5-Health Hazard Data

Permissible Exposure Level: See Section 2
Threshold Limit Value: See Section 2
Effects of Overexposure: Prolonged contact with skin can result in irritation and inflammation. WEAR GLOVES. Ingestion will not cause vomiting. DO NOT INGEST.
Emergency and First Aid Procedures:
Skin: wash with soap and water. Apply skin cream. Eyes: flush with water for at least 15 minutes. Get medical attention. Ingestion: will not induce vomiting. Give citrus juices, diluted vinegar, large amounts of water or milk. Call a doctor.

Section 6-Reactivity Data

Stability: unstable XX stable
Hazardous Polymerization: may occur XX will not occur
Hazardous Decomposition Products: NONE
Conditions To Avoid: NONE
Incompatibility (Materials to Avoid): NONE

Section 7-Spill or Leak procedures

Steps to be taken if material is released or spilled:
Contain and remove with inert absorbent rags or sand.
Waste Disposal Method: Biodegradable. Dispose according to local, state and federal regulations.

Section 8-Safe Handling and Use Information

Respiratory Protection: NONE
Ventilation: NONE Required.
Protective Gloves: Yes Eye Protection: Safety Glasses
Other Protective Clothing: NONE
Hygienic Practices: Wash hands after using. Do not eat while using prod.

-----+-----
| Section 9-Special Precautions |
+-----+-----

Precautions to be taken in Handling and Storing:

Protect from freezing.

Other Precautions: NONE

Material is reported in EPA TSCA Inventory List.....Yes

Is Material listed as Carcinogen or possible Carcinogen.....No

NTP Annual Report.....No

IARC Group 1 or 2.....No

OSHA 29CFR Part 1910, Subpart 2....No

ACGIH Appendix A.....No

Meets following Military Specifications:

Cleaning compound, Heavy Duty Liquid O-C-1824

Cleaning compound, Electrical and Electrical Components MIL-C-22542A/AS

Carbon removing compound P-C-111D

Carbon removing compound for agitating tank MIL-C-19853B/C

Notes and Approvals:

IndustraSolv has compound authorization as an approved degreaser for use in Federal inspected plants operating under the Food and Drug Administration and the Meat and Poultry Inspection Programs.

All ingredients conform to FDA Act CFR 176.170 and CFR 176.180

Meets all Right-to-Know Law Regulations

American Institute of Plant Engineers Approved (AIPE)

Paper Industry Management Association Approved (PIMA)

Ford Motor Company Tox. No. C2-024889

General Motors Corporation Health Control No. 5134

Kimberly Clark Corporation Item #287562

Government Services Association (GSA) Approved for factories dealing with government contracts and installations.

This product contains no ozone-depleting chemicals. Complies with 40 CFR 82.100 and 40 CFR 82.104.

Guarantee, disclaimer and limitation of liability:

AMAX Industrial Products division warrants its materials to be of good quality and, at its option, within one year from date of sale it will replace materials proven to be defective or refund the purchase price thereof, and such replacement or refund shall be the limit of AMAX Industrial Products division total liability. Except for the foregoing, all warranties, expressed or implied, including merchantability and fitness for a particular product, are excluded. AMAX Industrial Products division shall not be liable for any consequential, incidental; or special damages arising directly or indirectly from the use or misuse of the product.

IndustraSolv 30114 is a biologically safe, environmentally compatible machinery and parts degreaser, designed for industrial equipment cleaning and production applications.

This is non-toxic, non-hazardous and biodegradeable.

IndustraSolv 30114 will effectively dissolve grease, oil, coal dust, carbon, fly ash, adhesives and other industrial contaminants.

Now you don't have to sacrifice cleaning performance to avoid hazardous waste problems!!

IndustraSolv 30114 dilution ratios:

BUILDING MAINTENANCE	
Floors and walls	30-1
Carpet Spotting	5-1
Fiberglass	20-1
Concrete	10-1
Tile	20-1
Lighting Fixtures	20-1
Wax removal	10-1
Chillers	20-1
Parking Lot cleaning	20-1

AUTOMOTIVE	
Engine degreasing	20-1
Exterior wash	40-1
Wheels and rims	20-1
Tractors	20-1

MARINE	
Arresting gear area	30-1
Bulkheads	20-1
Bilges	20-1
Cargo containers	30-1
Cranes	30-1
Drilling rigs	20-1

MANUFACTURING	
Greasy Equipment	20-1
Fork Lifts	20-1
Steam Cleaners	30-1
High pressure sprayers	30-1
Sonic tanks	10-1
Parts tanks	20-1
Bucket and brush	20-1
Presses/Engines	20-1
Heavy equipment	20-1

KITCHENS/GALLEYS	
Food equipment	20-1
Stoves/ovens	20-1
Vents/filters	20-1
Tile flooring	30-1

AIRCRAFT	
Exterior paint	30-1
Landing gear	20-1
Interior area	20-1
Carpets	20-1
Filters	20-1
Ground vehicles	20-1
Cargo holds	20-1

Regulatory Information:

DOT Proper Shipping Name: Cleaning Compound DOT Class: None DOT ID Number: None
 SARA/Title III-CERCLA List of Hazardous Substances and Reportable Quantities (40CFR 304.4):
 This product does not contain an ingredient listed as a hazardous ingredient for Emergency Release Notification under Section 304.

SARA Title III-list of Toxic Chemicals subject to Release Reporting (Community Right to Know) (40CFR 372): This product does not contain an ingredient listed as a toxic chemical for Annual Release Reporting Requirements under Section 313.



Serving American Paper Mills, Factories and Mines Since 1959

MDA-7 STARBRITE

DIESEL FUEL IMPROVER WITH ALGAE POWER

DESCRIPTION

MDA-7 STARBRITE Diesel Fuel Improver with Algae Power is a multifunctional additive for diesel fuels that are used in turbine and internal combustion engines. It is used to resist the algae present and to maintain distillate fuels in a sludge-free stabilized condition. This eliminates a multitude of problems in the storage, transportation, and combustion of distillate (diesel) fuels.

Fuel stability is becoming a pressing problem as the practice of blending fuels from different sources becomes more widespread. Blending certain distillates can accelerate fuel oil degradation, which is the depolymerization and breakdown of hydrocarbons. This results in sludge formation, color deterioration, and disagreeable odor.

COMPOSITION

MDA-7 STARBRITE, an outstanding product, is blended with an excellent additive package. It includes:

Dispersants	Corrosion Inhibitors
Detergents	Combustion Catalysts
Algae Dispersants	

APPLICATION

Use One (1) gallon of MDA-7 STARBRITE to every 1000 Gallons of fuel.

PERFORMANCE CHARACTERISTICS

MDA-7 STARBRITE is an excellent multifunctional additive for diesel fuels used in turbine and internal combustion engines. It increases the fuel stability by providing better dispersion of heavy hydrocarbons, carbon, water, and other sludge and deposit forming substances. It improves the atomization and combustion of the oils, it also helps in preventing potential sludge forming reactions in either blended fuels or single stock distillate fuels. MDA-7 will also help to disperse existing sludge or other deposits in fuel systems.

MDA-7 STARBRITE contains active ingredients that are readily soluble in water to provide a non-deposit-forming protective film on metal surfaces in the fuel system to inhibit corrosion, and to provide environmental control with Algae Power.

MDA-7 STARBRITE is formulated to resist algae and readily emulsify in water to provide the environmental control that eliminates the degradation and disagreeable odors in oils during transportation and storage. MDA-7 STARBRITE is ashless in that it contains no inorganics or metallics. It is compatible with most hydrocarbon fuel stocks and is non-extractable. MDA-7 provides its multi-functional benefits without harmful side effects and without contributing any emissions or combustion products considered harmful to the environment. MDA-7 is Registered in accordance with the EPA Fuels and Fuel Additive regulations.

MANUFACTURED FOR



INDUSTRIAL PRODUCTS Paper Mills Division

960 SOUTH THIRD STREET • LOUISVILLE, KENTUCKY 40203
13333 BELL-RED ROAD • BELLEVUE, WASHINGTON 98009

1-800-662-0023



0908-2725

TRW-01353



800-662-0023

The Environmentally Safe Products You Want, Where And When You Want Them.

EQUIPMENT	FLOOR CARE	CLEANERS	LUBRICANTS
Air Guns Carburetors Parts Washers Dispensers (Various Types) Drum Cradles Drum Pumps Foggers Grease Dispensing Units (Various Types) Grease Guns Parts Washers Proportioners Soak Tanks Sprayers Spreaders Weed Killer Sprayers Welding Torches	Concrete Sealers Dust Mop Treatments Floor Finishes Floor Sealers Gym Finish Waxes Wax Strippers	All Purpose Concentrates Bowl Cleaners Carpet Shampoo Computer Kits Concrete Cleaner Contact Cleaner Degreasers Derusting Compound (Hot & Cold) Drain Openers Germicidal Cleaners Glass Cleaner Food Plant Cleaners Laundry Powder Sanitizers Spot & Stain Removers Stainless Cleaners Steam Cleaners Tile & Grout Cleaners	All Purpose Grease Anti-Seize Bell Dressing Chain & Cable Compressor Oil Coolants Cutting Oil Dry Lubricant Fifth Wheel Lube Food Grade Grease Fuel Oil Additives Gear Oil Hydraulic Oil Open Gear Penetrants Silicone Torque Fluid Transmission Fluid Turbine Oil Wire Rope Dressing
TRUCK AND AUTOMOTIVE	WATER TREATMENT	MUNICIPALS	INDUSTRIAL PRODUCTS
Aluminum Brightener Battery Cleaner Car Wash Carburetor Cleaner Degreasers Fuel and Oil Additives Parts Cleaners Tar Removers Truck Wash Upholstery Cleaner Whitewall Cleaners Windshield Wash	Algaecides Anti-Foam Agents Boiler Treatments Cooling Tower Treatments Descalers Rust Inhibitors	Asphalt Sealer Crack Filler Enzymes (Dry & Liquid) Fire Fighting Products Health Dept. Products Liquid Flocculants Odor Control Products Para Blocks Refuse Control Products Sewage Treatments Sewer Pipe Cleaners Street Marking Paint Wetting & Dusting Control	Aluminum Brightener Anti-Rust Products Anti-Skid Compound Anti-Static Products Coll Cleaner (Acid & Non-Acid) Coolants Degreasing Solvents Demolishing Compound Epoxy Floor Patch Hot Vat Masonry Cleaner Moisture Displacement Paint Strippers Parts Cleaners Protective Coatings Rig Wash Rust Strippers Safety Solvents Scale Removers Silicone Spray Snow & Ice Compounds Stainless Steel Coating Street Patching Compound Tar Removers
HAND CLEANERS	DISINFECTANTS & DEODORANTS	INDUSTRIAL SUPPLIES	AEROSOLS
Aerosol Creams (can) Gritty Hand Soap Liquid (Institutional & Industrial) Protective Hand Cream Tubes Waterless Instant Hand Sanitizer	Air Fresheners Air Sanitizers & Disinfectants Carpet Deodorant Fungicides Germicides Odor Masking Vomit Control	Absorbant Pads Absorbant Sox Barrier Tape Biocide Tablets Drop Lights Emergency Spill Kits First Aid Kits Hackaw Frames & Blades Instant Adhesive Nylon Ties Toughskin Light Bulbs Safety Glo Signs & Tape	Anti Static Coatings Degreasers Deodorants Disinfectants First Aid Insecticides Lubricants Polishes Solvents Specialties Weed Killer Welders Non-Splatter
GROUND PRODUCTS	INSECTICIDES	HEAVY EQUIPMENT DEPT.	
Aquatic Weed Killer Fertilizers Insecticides Liquid Edger Non-Selective Weed Killer Selective Weed Killers Soil Binder Soil Conditioners Soil Sterilant Weed & Brush Killers	Fire Ant Fogging Insect Repellent Mosquito & Fly Mouse & Rat Bait Residual Concentrate Turf & Grounds Wasp & Bee Water Base & Oil	Aerosol Lubricant Battery Maintenance Bearing & Gear Lube Belt Conditioner Carb Cleaner Chain & Cable Lube Chassis Lubricant Degreaser De-Icer Fuel Conditioner Starting Fluid Steam Cleaning Compound	
PATCHING PRODUCTS	OIL FIELD		
Adhesives Aqua Patch Asphalt Patch Concrete Patch Copper Stick Roof Patch Steel Stick Wood Patch	Absorbants Anti-Seize Cutting Oil Dri-Lube EPA Compliance Products High Temp Lube Rust Preventatives Rust Strippers Teflon Tape		
	WELDING PRODUCTS		
	Electrodes Brazing Alloys Solders		
	ELECTRICAL DEPARTMENT		
	Coatings Cold Galvanizing Contact Cleaner Cutting Oil Degreasers Dry Lubrication Moisture Dispenser Safety Solvents Thread Sealer		

TRW-01354

Member Of:

Chicago, IL / Louisville, KY
 New York, NY / Norwalk, CT
 San Carlos, CA / South Plainfield, NJ
 Tampa, FL / Montreal, PQ / Dallas, TX



PRODUCTS YOU CAN RELY ON

0908-2726



AMAX

INDUSTRIAL PRODUCTS DIVISION

1-800-662-0023

R895 DuraCure Concrete Sealer



Designed for use in areas exposed to harsh chemicals and other corrosive environments. Commonly used as a lining for tanks, acid pits, sumps, trenches, concrete floors and other severe exposure areas.

Single System Air Curing... No Mixing!

This is a single package product and does not require the addition of a catalyst to cure. It cures by the action of the moisture in the air.

Reduces Maintenance Costs!

Easy to keep clean. Provides complete protection against oil and chemical spills.

Added Benefits:

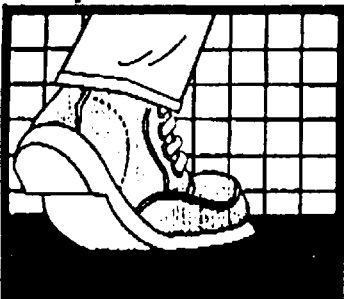
High performance. Water, chemical, and abrasion resistant coating designed for metal, concrete, masonry and wood surfaces.

- Resists contact immersion in fresh and salt water to 125° F.
- Resists heavy foot and vehicle traffic.
- May be applied over previous (aged) coatings.
- Available colors - Lt. Gray, Dk. Gray, Beige, Tile Red.
- Heat resistant up to 300° F.
- Withstands frequent, harsh scrubbing.
- Specially recommended for use in apartment buildings, food processing plants, and in the chemical, cement, fertilizer, mining, petroleum and pulp and paper industries.
- Exceeds OSHA Requirements for hazardous waste storage areas

Abrasion Resistant
High-Gloss
Stops Chemical Attacks



SlipNot



SlipNot is an epoxy compound with silica carbide granules for skid-proofing walkways, ramps, loading docks and stairs where slippery conditions exist. This will bond to wet, damp, or dry surfaces of concrete, brick, wood, steel, aluminum and tile. Brush, trowel or roll this coating on. Requires no acid etching.

Resistant

Totally resistant to water, bleach, chlorine, sulfuric acid, alkalis, oil, gasoline and caustic chemicals. Perfect for use on the bleach plant floors, around paper machine areas and chemical processing plants.

Simple Application

Five times more durable than adhesive strips, never becomes a tripping hazard. Grit bites directly into shoes to provide a firm footing even under 2" of oil or slime build-up. Stands up to heavy vehicle and pedestrian traffic.

Simple Application

All components are in one package. Just mix and apply. No acid etching required. Quick and easy application.

Minimum Downtime

Floor can be put back into service after 5 hours. No harsh odor. Downtime is kept to a minimum.

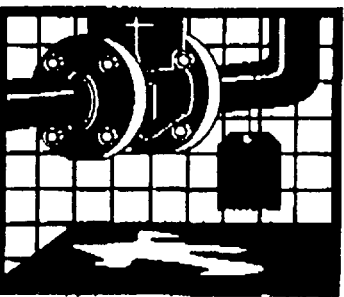
Easy Maintenance

Its continuous film provides a durable surface to minimize and reduce cleaning costs. Ends concrete dusting. No cracks or seams to catch paper dust, grease or other contaminants. Just rinse clean and air dry!

Permanent
Slip-Proof Coating
Resistant to Chemicals



IndustraPatch 1010CR



An excellent concrete repair compound that is economical to use, durable enough for long lasting repairs and is easy to mix and apply. IndustraPatch 1010CR will form a permanent bond to new or old concrete, brick, masonry, metal or wood surfaces. Has the consistency of wet concrete and can be easily poured or troweled to thicknesses of 1/8" or more. Typical working life is 45 minutes. Functional cure in 4 hours, complete cure in 7 hours.

For Tough Industrial Areas

A 2-part concrete patch designed for use in areas exposed to harsh chemicals and other corrosive environments. Commonly used as a liner for acid-pits, tanks, pump bases, sumps, chemical trenches and other severe exposure areas. Excellent material for filling deep ruts, anchor bolt holes, cracks, expansion joints and exposed aggregate areas.

Indoors or Outdoors

Designed for both interior and exterior use.

High Compression Strength!

Used as a heavy duty floor resurfacer, this will provide outstanding resistance to heavy foot and vehicle traffic. Perfect for ramps, traffic lanes and loading dock areas.

Chemical Resistance

Totally resistant to bleach, chlorine, acid, alkalis, water, chlorinated and ketone solvents, cutting oils, fuel oil and de-icers.

Safe For Employees

Complies with VOC Architectural Maintenance regulations. USDA/FDA registered. Mix in small batches as necessary. Easy to clean. Dries to a completely non-porous, chemical resistant surface. This is the best and easiest flooring compound for patching, repairing, rebuilding and protecting concrete.



TRW-01355

Easy To Use
Permanent Patch
Stops Chemical Attack

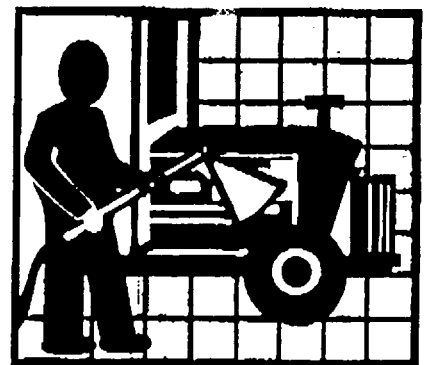
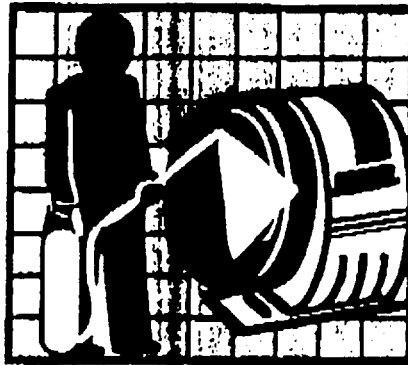
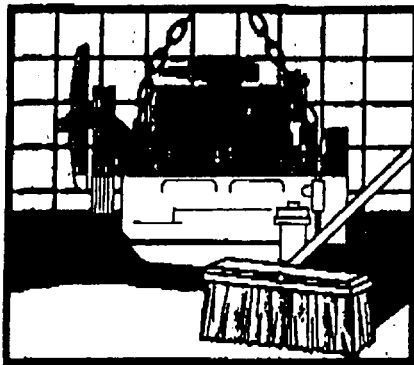
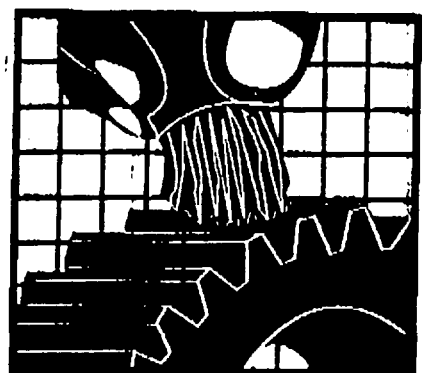


Exceeds OSHA Requirements for hazardous waste storage areas!

0908-2727

Serving America's Paper Mills, Factories and Mines Since 1959!

There is a safe alternative to trichlor for industrial degreasing!



IndustraSolv 30114 is the safe, cost-effective alternative to trichlor 1,11, methylene chloride, kerosene, stoddard solvent and all hazardous solvent cleaners. You will eliminate hazardous waste, comply with new OSHA and EPA regulations, and reduce VOC's by 90%.

IndustraSolv is a nonflammable, biodegradeable and non-toxic degreaser that will effectively and quickly dissolve machinery grease and carbon commonly found in industry. This will answer the real need of maintenance personnel, always faced with the job of cleaning parts and equipment before and after repair work.

Use It to regularly clean pump casings, impellers, shafts, seals, gland bolts, stuffing boxes, drive motors and couplings. Also cleans valve bodies, flanges, wheels and stems.

IndustraSolv has ten years of satisfied customers in the paper mill, industrial, aircraft, automotive and military sector. There is no equal for the safe and effective removal of carbon, grease and oil.

IndustraSolv will strip grease, oil, wax, polymer, rust and hydraulic oil from hard surfaces such as concrete floors, masonry walls, drilling rigs, engine blocks, railroad equipment, construction machinery and machine shop equipment. Use in steam cleaners, portable sprayers, dip tanks, even manually. Will not remove paint or decals. Will not cause rust!

Find out more, call today.
Talk to a certified chemical engineer.
He'll help find the answer to your specific needs.

Call toll-free 1-800-662-0023.

AMAX

DISTRIBUTION POINTS FROM COAST TO COAST

Chicago, IL / Louisville, KY / Dallas, TX / Bellevue, WA / Baltimore, MD / Tampa, FL / San Carlos, CA



AMAX

INDUSTRIAL PRODUCTS DIVISION

1-800-662-0023



to the environment, indicates a biodegradable, environmentally safe formulation.



KoolKut 303

A synthetic coolant/cutting fluid that extends tool life, doesn't gel, will not go rancid, stays clear - eliminates dermatitis. Produces cleaner threads and smoother surface finishes. Improves machineability, stops galling. High-performance. Fireproof. Non-toxic. Biodegradable.



IndustraPatch 1010CR

Two-part, permanent, concrete patch and resurfacer. Will fill cracks, spalled areas, anchor bolt holes and expansion joints. Cures in 4 hours. Resistant to bleach, chlorine, acids and caustics. Concrete gray color. Stops chemical and acid attacks.



Safety First

Instant action, heavy-duty degreaser is specially formulated to dissolve and remove carbon, oils, grease and thick sludge from parts and equipment. Biodegradable. Fireproof. Non-toxic. Safe for paint and aluminum. Non-irritating to skin.



Fire Ant Killer Concentrate

A low odor, contact killer, with special wetting agents for deep penetration, gives 100% Fire-Ant kill. Dilutes 5-1 with water. Long lasting. Economical. Stable emulsion. This will prevent the nest from reappearing.



GripTile 2010

A permanent epoxy compound with silica carbide granules, for skid proofing walkways, ramps, loading docks and stairs where slippery conditions exist. Bonds to concrete, metal, wood and aluminum. Resists chemicals, water, oil, gasoline. Withstands fork lift and pedestrian traffic.



DuraCure Concrete Sealer

High-performance concrete sealer is designed for use in areas exposed to harsh chemicals and other corrosive environments. Will provide complete protection against oil and chemical spills. Easy to keep clean.. permanent. Available in colors.



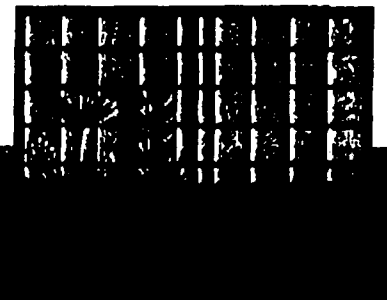
Burndown 18% Herbicide

Kills all unwanted vegetation completely from leaf, stem to root - without sterilizing soil. Treated areas can be planted or seeded 7 days after application. Will not leach to affect nearby grass, trees, plants or groundwater. Non-toxic, no fumes. Approved for unrestricted use in all 50 states.



DSD Disinfectant

Our most powerful disinfectant and bactericide concentrate. Designed to provide effective cleaning, deodorizing, sanitizing and disinfection for hospitals, nursing homes, food plants and factories. Great for shower rooms. Effective against Herpes Simplex (Type 1) and HIV virus.



WK44 Vegetation Killer

Long-lasting, bare ground weed control. Non-selective, total kill herbicide, with residual control to prevent regrowth. This product kills ALL vegetation. Use for complete control on railroad right-of-ways, fence rows, pipeline areas, parking lots, around buildings, tank farms and industrial sites.

Serving America's Paper Mills, Factories and Mines Since 1959!

MATERIAL SAFETY DATA SHEET

(Prepared According to 29 CFR 1910.1200)

SECTION 1 - PRODUCT IDENTIFICATION

Supplier Standardized Sanitation Systems, Inc.	Emergency Phone 617/273-2020
Address 141 Middlesex Turnpike, Burlington, MA. 01803-4493	
Trade Name SSS SCOTTY	Product Type Industrial All-Purpose Cleaner/Degreaser

SECTION 2 - INGREDIENTS

CHEMICAL NAME/COMMON NAME	CAS NO.	PERCENT(optional)	TLV(Source)
Silicic Acid - Sodium Salt	1344-0-9-8		2.0mg/M3 (as NaOH)
Tetrasodium E.D.T.A.	64-02-08		2.0mg/M3 (As NaOH)

SARA HAZARD: TITLE III, SECTION 313: Contains no Section 313 listed substances subject to reporting.

SECTION 3 - PHYSICAL DATA

Boiling point (°F.) 212°F	Specific Gravity (H ₂ O=1.0) 1.039 ± 0.005	pH 12.2 ± 0.5	
Vapor Pressure (mm Hg) Not Determined	Vapor Density (Air=1) Not Determined		
Solubility in water <input checked="" type="checkbox"/> Complete <input type="checkbox"/> Insoluble	<input type="checkbox"/> Emulsifiable (or Dispensable) <input type="checkbox"/> Slight (or Partial)		
Evaporation Rate (vs. H ₂ O) <input type="checkbox"/> Faster <input type="checkbox"/> Slower <input checked="" type="checkbox"/> About the Same	Appearance and Odor Clear, orange liquid with no distinct odor.		

SECTION 4 - FIRE AND EXPLOSION HAZARD DATA

Flash Point (T.C.C.) °F <input checked="" type="checkbox"/> None to Boiling	Flammable Limits N/A Upper Lower
Extinguishing Media Product is non-combustible. Water Spray (Fog), Dry Chemical, CO₂, or Foam may be used where product is stored.	
Special Freight Procedures Do not enter confined fire-spaces without protective clothing and self-contained air supply.	
Unusual Fire and Explosion Hazards None	

SECTION 5 - REACTIVITY DATA

Stability Stable	Incompatibility Strong acids/oxidizers. Do not mix with chlorinated detergents (bleach).
Hazardous Decomposition Products Burning may produce carbon monoxide and/or carbon dioxide.	

SECTION 6 - HEALTH HAZARD DATA

Primary Routes of Exposure <input checked="" type="checkbox"/> Eye <input checked="" type="checkbox"/> Skin <input type="checkbox"/> Oral <input type="checkbox"/> Inhalation <input type="checkbox"/> Other	Signs and Symptoms of Overexposure (Acute) Prolonged or repeated contact of concentrated product with skin and/or eyes will cause irritation and reddening. Eye damage possible if contact is prolonged. Harmful or fatal if swallowed.
Signs and Symptoms of Overexposure (Chronic) None currently known.	
Medical Conditions Aggravated by Overexposure An existing dermatitis.	
Carcinogen or Suspect Carcinogen Ingredients <input type="checkbox"/> NTP <input type="checkbox"/> IARC <input type="checkbox"/> OSHA <input checked="" type="checkbox"/> NONE	

SECTION 7 - EMERGENCY AND FIRST AID PROCEDURES

Eyes	Flush eyes with water for at least 15 minutes and call a physician immediately.
Skin	Wash affected areas with large amounts of soap and water. If irritation persists call physician.
Ingestion	Do NOT induce vomiting. Dilute by drinking water. Call a physician immediately.
Inhalation	Remove to fresh air. Start artificial respiration if necessary. Oxygen may be administered. Call a physician.

SECTION 8 - SPECIAL PROTECTION INFORMATION

Respiratory Protection Not required under normal use conditions. Avoid misting conditions.	
Ventilation Requirements N/A <input type="checkbox"/> Local Exhaust <input type="checkbox"/> Mechanical <input type="checkbox"/> Other	Eye Protection Safety Glasses/Goggles
Protective Gloves Rubber/PVC Other Protective Clothing Work clothing covering arms and legs as required to minimize contact. Eye bath and safety shower.	

SECTION 9 - SPILL OR LEAK PROCEDURES

Steps to be Taken if Released or Spilled	Safely stop spill at source. Contain spill by diking with soil or other inert material. Mop, pump or absorb with material and reclaim into sound containers for proper disposal.
Waste Disposal Methods	Dispose of in an approved waste facility according to Federal, State and local regulations.

SECTION 10 - STORAGE AND HANDLING INFORMATION

Precautions to be Taken - Handling and Storage	No special requirements if product is handled according to good manufacturing practices.
--	---

The health hazards given on this Material Safety Data Sheet apply to the product in its concentrated form (as supplied) and may differ significantly at use dilution. The signs and symptoms of overexposure apply only to negligence in handling or misuse of the concentrated product and not to the routine exposure of the diluted product under conditions of ordinary use.

DATE PREPARED: 5/7/90

HMS
HAZARD
RATING

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	X

0 - LEAST
1 - SLIGHT
2 - MODERATE
3 - HIGH
4 - EXTREME


McGean-Rohco, Inc.

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

**MATERIAL SAFETY
DATA SHEET**

Product Name: Interlox AR-I		Emergency Phone No.: * (313) 872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 6/18/85	Revised Date: 5-17-89

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
Phosphoric Acid SARA 313 CHEMICAL	23	1Mg/ M ³	7664- 38-2	No
Chromic Acid SARA 313 CHEMICAL	40	5Mg/ M ³	1333- 82-0	Yes

PHYSICAL DATA

Boiling Point: Over 212°F	Freezing Point: UK	Specific Gravity: 1.54	pH: 1.0
Vapor Pressure at 20° C: UK	Vapor Density (Air = 1): UK	% Volatiles by Volume: None	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) UK		Solubility in Water: 100 %	
Appearance and Form: Reddish Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA	Flammable Limits in Air: Upper: NA Lower: NA
Test Method: NA	% By Volume
Extinguishing Media: NA	
Special Fire Fighting Procedures: NA	
Unusual Fire and Explosion Hazards: Not flammable. But, strong oxidizing agent and will support combustion.	
DOT Classification: Corrosive Material NA 1760	Note: UK = Unknown NA = Not Applicable

* AFTER 5:00 PM, CALL EITHER 559-2775 OR 455-6587.

TRW-01359

0908-2731

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body:

LTV 0.5Mg/M³ as chromic acid.
Corrosive to skin and eyes.

Emergency and First Aid Procedures:

Flush with water and seek medical attention.

REACTIVITY DATA

☒ Stable

☐ Unstable

Conditions to Avoid:

Incompatibility — Materials to Avoid: Flammable or combustible material, or strong reducing agents.

Hazardous Decomposition Products: None

Hazardous Polymerization:

☐ May Occur

☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills:

Collect on sand and put in steel container or flush with water to chemical treating sump or tank.

Waste Disposal Methods:

From water, reduce, using sodium bisulfite or sodium hydrosulfite. Precipitate trivalent chromium oxide and collect for further disposal.

DISPOSER MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator: None

Ventilation: Local-normal rate.

Gloves:
Neoprene

Eye and Face:
Chemical Goggles

Other:
Rubber Apron

Handling and Storage: Store in dry area, away from reducing agents.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

**McGean-Rohco, Inc.**

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

#13545

**MATERIAL SAFETY
DATA SHEET**

Product Name: Interlox Accelerator 110		Emergency Phone No.: * (313) 872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 10-21-89	Revised Date:

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
None Listed By OSHA	NA	NA	NA	No

PHYSICAL DATA

Boiling Point: 220°F	Freezing Point: 30°F	Specific Gravity: 1.15	pH: Solution 10-11
Vapor Pressure at 20° C: As Water	Vapor Density (Air = 1): As Water	% Volatiles by Volume: Zero	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) As Water		Solubility in Water: 100%	
Appearance and Form: Colorless Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: None	Flammable Limits in Air: Upper: NA Lower:
Test Method: NA	% By Volume
Extinguishing Media: NA	
Special Fire Fighting Procedures: NA	
Unusual Fire and Explosion Hazards: NA	
DOT Classification: Not Regulated	Note: UK = Unknown NA = Not Applicable

* AFTER 5:00 PM, CALL EITHER 559-2775 OR 455-6587

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body:

Mild skin and severe eye irritant.

Emergency and First Aid Procedures:

Flush skin and eyes with cool water.
If eye contact is made flush with water for at least 15
minutes and seek medical attention if irritation persists.

REACTIVITY DATA

☒ Stable☐ Unstable

Conditions to Avoid:

Incompatibility — Materials to Avoid:

Strong Acids

Hazardous Decomposition Products:

None

Hazardous Polymerization:

☐ May Occur☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills:

Flush to sewer with water.

Waste Disposal Methods:

Dispose as mild detergent. Neutralize to neutral pH.

DISPOSER MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator:

None Required

Ventilation:

Mechanical-Normal Rate

Gloves:

Neoprene

Eye and Face:

Goggles

Other:

None

Handling and Storage:

Store in cool dry area.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

**McGean-Rohco, Inc.**

1250 Terminal Tower, Cleveland, Ohio 44113, 216/821-6425

**MATERIAL SAFETY
DATA SHEET**

Product Name: INTERLOX BLACK KOTE PF		Emergency Phone No.: *313/872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, Michigan 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 1-7-86	Revised Date: 7-10-86

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
ETHYLENE GLYCOL MONO BUTYL ETHER	10	25 ppm	111-76-2	No
DIMETHYLETHANOLAMINE	<5	NA	108-01-0	No
CARBON BLACK	<5	3.5mg/M ³	1333-86-4	No
TALC	10	2mg/M ³	14807-96-6	No

PHYSICAL DATA

Boiling Point: 212-340°F	Freezing Point: 32°F	Specific Gravity: 1.18	pH: 8.5-9.5
Vapor Pressure at 20°C: As water	Vapor Density (Air = 1): As water	% Volatiles by Volume: 65	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) As H ₂ O		Solubility in Water: 100%	
Appearance and Form: Black Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: 143°F	Flammable Limits in Air: Upper: % By Volume Lower: 1.1
Test Method: SETA Flash	
Extinguishing Media: CO ₂ , Foam, dry chemical, water fog.	
Special Fire Fighting Procedures: Use water to cool closed containers.	
Unusual Fire and Explosion Hazards: Closed containers may explode if exposed to extreme heat.	
DOT Classification: Combustible Liquid NA 1993	Note: UK = Unknown NA = Not Applicable

AFTER 5:00 PM, CALL EITHER 559-2775 OR 455-6587

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body: Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Eye Contact: Primary irritation. Skin Contact: Primary irritation.

Emergency and First Aid Procedures: Inhalation: Remove to fresh air. Restore breathing. Treat symptomatically. Consult physician. Splash (eyes): Flush immediately with large amounts of water for at least 15 minutes. Take to physician for medical treatment. Splash (skin): Wash affected areas with soap and water. Remove contaminated clothing. Consult physician if irritation persists. Ingestion: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. **REACTIVITY DATA** Consult physician or poison control center immediately.

☒ Stable ☐ Unstable Conditions to Avoid:

Incompatibility — Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: CO, CO₂, oxides of nitrogen.

Hazardous Polymerization:

☐ May Occur ☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills: Dike area to contain spill. Avoid breathing vapors. Recover free liquid by addition of inert absorbent to spill. Clean up area and place material in a suitable disposal container using non-sparking tools.

Waste Disposal Methods: Disposal must be made in accordance with local, state and federal disposal laws. Incineration or landfilling must be in an approved facility. Do not incinerate closed containers.

SPECIAL PROTECTION INFORMATION

Respirator: None required if adequate ventilation used.

Ventilation: Local-normal rate.

Gloves:
Rubber

Eye and Face:
Goggles

Other:
Rubber apron

Handling and Storage: Do not store above 120°F. Store away from high heat, sparks or open flame. Avoid skin and eye contact. Avoid prolonged or repeated breathing of vapors or mist.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.


McGean-Rohco, Inc.

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

**MATERIAL SAFETY
DATA SHEET**

Product Name: INTERLOX COMPOUND 2325 MCIZ		Emergency Phone No.: * (313) 872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 7-10-85	Revised Date: 3-27-89

INGREDIENTS AND HAZARDOUS COMPONENTS

Material		%	TLV	C.A.S. #	Suspect Carcinogen
Phosphoric Acid	SARA 313 CHEMICAL	14	1Mg/ M ³	7664- 38-2	No
Nitric Acid	SARA 313 CHEMICAL	10	5Mg/ M ³	7697- 37-2	No
Zinc Compound	SARA 313 CHEMICAL	8.5	NA	7999- 90-0	No

PHYSICAL DATA

Boiling Point: 230°F	Freezing Point: UK	Specific Gravity: 1.41	pH: 0.1
Vapor Pressure at 20°C: UK	Vapor Density (Air = 1): UK	% Volatiles by Volume: None	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) NA		Solubility in Water: 100%	
Appearance and Form: Clear Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA	Flammable Limits in Air: NA
Test Method: NA	Upper: % By Volume
	Lower: % By Volume
Extinguishing Media: NA	
Special Fire Fighting Procedures: NA	
Unusual Fire and Explosion Hazards: None	
DOT Classification: Corrosive Material NA 1760	Note: UK = Unknown NA = Not Applicable

* AFTER 5:00 PM, CALL EITHER 559-2775 Or 455-6587

TRW-01365

0908-2737

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body:

TLV=1Mg/M³ based on phosphoric acid.
Severe skin and eye irritant.

Emergency and First Aid Procedures:

Flush skin and eyes with water for at least 15 minutes.
Seek medical attention for eyes. Remove contaminated clothing and launder before reuse.

REACTIVITY DATA

☒ Stable

☐ Unstable

Conditions to Avoid:

Incompatibility — Materials to Avoid:

Do not mix with strong alkali.

Hazardous Decomposition Products:

Contact with metal may give off NO_x fumes.

Hazardous Polymerization:

☐ May Occur

☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills:

Wash with plenty of water to chemical sewer for treatment of heavy metals.

Waste Disposal Methods:

Neutralize and treat for heavy metal, zinc, and nickel.

DISPOSER MUST COMPLY WITH FEDERAL STATE AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator:

None

Ventilation:

Local, normal rate.

Gloves:

Neoprene

Eye and Face:

Chemical Goggles

Other:

Rubber Apron

Handling and Storage:

Store in cool area away from strong reducing agents and alkalies.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.


McGean-Rohco, Inc.

1250 Terminal Tower Cleveland, Ohio 44113, 216.621-5425

**MATERIAL SAFETY
DATA SHEET**

Product Name: Interlox TEA Paint/Oil Extender		Emergency Phone No.: *313/872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 7-15-86	Revised Date:

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
Triethanolamine	45-50	NA	102-71-6	No
Diethanolamine	1-4	15mg/m ³	111-42-2	No

PHYSICAL DATA

Boiling Point: Over 212°F	Freezing Point: Below 32°F	Specific Gravity: 1.065	pH: 9.5
Vapor Pressure at 20°C: UK	Vapor Density (Air = 1): NA	% Volatiles by Volume: Zero	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) NA		Solubility in Water: Complete	
Appearance and Form: Clear Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: Over 375°F	Flammable Limits in Air: UK
Test Method: PMCC	% By Volume Upper: Lower:
Extinguishing Media: Carbon Dioxide, Foam, Water.	
Special Fire Fighting Procedures: Use self-contained breathing apparatus.	
Unusual Fire and Explosion Hazards: None	
DOT Classification: Non Regulated	Note: UK = Unknown NA = Not Applicable

*AFTER 5:00 PM, CALL EITHER 559-2775 OR 455

HEALTH HAZARD DATA

and of Overexposure and Primary Entries to Body: Irritant to eyes and skin.

Emergency and First Aid Procedures: Wash contacted area with soap and water.
Remove contaminated clothing, launder before reuse.

REACTIVITY DATA

☒ Stable ☐ Unstable Conditions to Avoid:

Incompatibility — Materials to Avoid: Strong oxidizers such as chromic acid.

Hazardous Decomposition Products: Carbon dioxide or monoxide on combustion.

Hazardous Polymerization: ☐ May Occur ☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills: Mop up excess and place in steel drum. Do not discharge to sewers with metallic oxides for precipitation such as copper or nickel.

Waste Disposal Methods: Incinerate solid wastes.

DISPOSER MUST COMPLY WITH FEDERAL, STATE AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator: None needed.

Ventilation: None needed.

Gloves: Neoprene	Eye and Face: Wrap around safety glasses.	Other: None needed.
---------------------	--	------------------------

Handling and Storage: Store indoors at 50-90°F, away from oxidizing materials and acids.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

**McGean-Rohco, Inc.**

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

13591

**MATERIAL SAFETY
DATA SHEET**

Product Name: Interlox Zinc Phosphate 907-NF		Emergency Phone No.: (313) 872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 7-19-90	Revised Date:

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
Phosphoric Acid SARA 313 Chemical	30	1mg/ M ³	7664-- 38-2	No
Nitric Acid SARA 313 Chemical	14.5	5mg/ M ³	7697	No
Zinc Compound SARA 313 Chemical	17	NA	7779-- 90-0	No

PHYSICAL DATA

Boiling Point: 230°F	Freezing Point: UK	Specific Gravity: 1.645	pH: 0.1
Vapor Pressure at 20°C: UK	Vapor Density (Air = 1): UK	% Volatiles by Volume: None	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) NA		Solubility in Water: 100%	
Appearance and Form: Green Liquid, Odorless			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA	Flammable Limits in Air: NA
Test Method: NA	% By Volume Upper: Lower:
Extinguishing Media: NA	
Special Fire Fighting Procedures: NA	
Unusual Fire and Explosion Hazards: NA	
DOT Classification: NA	Note: UK = Unknown NA = Not Applicable

* AFTER 5:00 PM, CALL EITHER 559-2775 or 455-6587

0908-2741

TRW-01369

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body:

Severe skin and eye irritant.

Emergency and First Aid Procedures: Skin: Flush with clean clean water. If irritation persists get medical attention. Eyes: Flush with clean water for at least 15 minutes and get medical attention. Remove contaminated clothing and launder before reuse.

REACTIVITY DATA

☒ Stable ☐ Unstable **Conditions to Avoid:**

Incompatibility — Materials to Avoid: Do not mix with strong alkali

Hazardous Decomposition Products: Contact with metal may give off NO_x fumes.

Hazardous Polymerization: ☐ May Occur ☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills:

Wash with plenty of water to chemical sewer for treatment of heavy metals.

Waste Disposal Methods: Neutralize and treat for heavy metal zinc.

DISPOSER MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator: None

Ventilation: Local-normal rate

Gloves: Neoprene	Eye and Face: Chemical Goggles	Other: Rubber Apron
----------------------------	--	-------------------------------

Handling and Storage:
Store in cool area away from strong reducing agents and alalkalies.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.



MAN-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745
EMERGENCY 24 HOUR CHEMTREC NO. 800-421-8800

MATERIAL SAFETY DATA SHEET

51800

Section I

Identity IRCO BOND 51800 DIF	Date Prepared 10/28/88	Date Revised 10/21/88
NFPA CODE: HEALTH: 2	FLAMMABILITY: 0	REACTIVITY: 0

Section II - Hazardous Ingredients

Hazardous Ingredients	CAS #	OSHA - PEL	ACGIH TLV-TWA	Other Hazard
PHOSPHORIC ACID	7664-38-2	1 MG/CUM STEEL-3 MG/CUM	1 MG/CUM	CORROSIVE
SOLUBLE NICKEL DIARS MONOGRAPHS	7440-02-0		0.1 MG/CUM	SUSPECT CANCER
ZINC NITRATE	7779-88-6			OXIDIZER

Section III - Physical/Chemical Characteristics

Boiling Point	NOT DETERMINED	Specific Gravity (H ₂ O=1)	1.65
Vapor Pressure (mm Hg)	NOT DETERMINED	Percent Volatile by Volume (%)	NOT DETERMINED
Vapor Density (AIR=Reference)	NOT DETERMINED	Evaporation Rate (ETHER=Reference)	SLOWER
Water Soluble	YES		
Appearance and Odor	LIGHT GREEN LIQUID WITH NO ODOR		

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
NOT FLAMMABLE	NOT APPLICABLE		
Extinguishing Media	ALTHOUGH MATERIAL IS NON-FLAMMABLE, KEEP CONTAINER COOL WITH WATER SPRAY IF FIRE OCCURS.		
Special Fire Fighting Procedures	WEAR SELF CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE AND PROTECTIVE CLOTHING WHILE FIGHTING FIRES.		
Unusual Fire and Explosion Hazards	NONE KNOWN.		

Section V - Reactivity Data

STABILITY	Unstable	Conditions to Avoid
	Stable *	NONE KNOWN

TRW-01371

METAL PROCESSING SYSTEMS

0207000-00 TRW FASTENERS DIVISION

0908-2743



Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745

EMERGENCY 24 HOUR CHEMTREC NO. 800-424-9300

MATERIAL SAFETY DATA SHEET

TRW 50ND 51500 DTP

51500

Section V - Reactivity Data Cont

INCOMPATIBILITY (Materials to Avoid)

REDUCING AGENTS AND ALKALINE MATERIALS

Hazardous Decomposition Products

OXIDES OF NITROGEN AND PHOSPHORUS

HAZARDOUS

May Occur

Conditions to Avoid

POLYMERIZATION

Will Not Occur

NONE

Section VI - Health Hazard Data

Primary Routes of Entry: Primary Route Inhalation?

Skin?

Ingestion?

Effects of Overexposure: SPLASHES CAN CAUSE SKIN BURNS OR SEVERE EYE DAMAGE. HARMFUL IF SWALLOWED.

Medical Conditions Aggravated by Overexposure

Emergency and First Aid Procedures:

Eye (Contact): FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES AND CONTACT PHYSICIAN IMMEDIATELY.

Skin (Contact): FLUSH WITH WATER FOR 15 MINUTES. CONTACT PHYSICIAN IF IRRITATION PERSISTS.

Ingestion (Ingestion): DRINK LARGE QUANTITIES OF MILK OR WATER. CONSULT PHYSICIAN IMMEDIATELY.

Inhalation (Breathing): REMOVE TO FRESH AIR.

Section VII - Precautions for Safe Handling & Use

Steps to be taken in Case Material is Released or Spilled

CONTAIN SPILL AND RECOVER CLEAN MATERIAL. NEUTRALIZE WITH MILD CAUSTIC.

Waste Disposal Method:

DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

Precautions to be Taken for Handling and Storage

STORE ABOVE FREEZING
STORE IN COOL, CLEAN, DRY LOCATION. STOCK SHOULD BE ROTATED. STORE AWAY FROM ALKALIS. STORE ONLY IN WELL VENTILATED AREAS.

Other Precautions

SHOWERS AND EYE WASH FOUNTAINS SHOULD BE MADE AVAILABLE WHERE CHEMICALS ARE USED.

Section VIII - Control Measures

TRW-01372

Respiratory Protection (Specify Type)

USE NIOSH APPROVED EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED

METAL PROCESSING SYSTEMS

0207300-00 TRW FASTENERS DIVISION

0908-2744



Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745
EMERGENCY 24 HOUR CHEMTREC NO. 800-424-9300

MATERIAL SAFETY DATA SHEET

1300 BOND 51300 DIP

51300

Section VIII - Control Measures Cont.

VENTILATION Local
Mechanical RECOMMENDED TO MAINTAIN BELOW TLV

Protective Gloves NEOPRENE RUBBER Eye Protection
SPASH GOGGLES OR FACE SHIELD

Other Protective Clothing or Equipment
PROTECTIVE CLOTHING SUFFICIENT TO PREVENT SKIN CONTACT.

Work/Hygienic Practices
WASH THOROUGHLY BEFORE EATING, SMOKING OR USING TOILET FACILITIES.

Section IX - Additional Information

D.O.T. Proper Shipping Name: COMPOUND, CLEANING, LIQUID

D.O.T. Hazard Class: CORROSIVE MATERIAL

D.O.T. Identification #: NA-1760

TRW-01373

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF THE SELLER'S KNOWLEDGE; HOWEVER, THE SELLER MAKES NO WARRANTY WHATSOEVER, EXPRESSED, IMPLIED, OR OF MERCHANTABILITY REGARDING THE ACCURACY OF SUCH DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. THE SELLER ASSUMES NO RESPONSIBILITY FOR INJURY TO THE BUYER OR TO THE THIRD PARTY PERSONS OR FOR ANY DAMAGE TO ANY PROPERTY AND BUYER ASSUMES ALL SUCH RISK.

METAL PROCESSING SYSTEMS

6047300-00 TRW FASTENERS DIVISION

0908-2745

Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 216 - 486-5300 • CHEMTREC 800 - 424-9300



MATERIAL SAFETY DATA SHEET

Section I			
Identity *IRCO RINSE 52807		Date Prepared 11/18/85	Date Revised
NFPA CODE HEALTH 2		FLAMMABILITY 0	REACTIVITY 1
Section II — Hazardous Ingredients			
Hazardous Ingredients	CAS #	Health Hazards	ACGIH TLV - TWA
CHROMIC ACID (AS CR) *IARC MONOGRAPHS	1333-82-0	*SUSPECT CANCER	0.5 MG/CUM
CALCIUM CHROMATE *IARC MONOGRAPHS	8012-75-7	*SUSPECT CANCER	0.1 MG/CUM
Section III — Physical/Chemical Characteristics			
Boiling Point NOT DETERMINED	Specific Gravity (H ₂ O = 1) 1.53		
Vapor Pressure (mm Hg) NOT DETERMINED	Percent Volatile By Volume (%) NOT APPLICABLE		
Vapor Density (AIR = Reference) NOT DETERMINED	Evaporation Rate (Ether = Reference) SLOWER		
Water Soluble YES			
Appearance and Odor REDDISH-BROWN LIQUID			
Section IV — Fire and Explosion Hazard Data			
Flash Point (Method Used) NOT FLAMMABLE	Flammable Limits NOT APPLICABLE		LEL UEL
Extinguishing Media ALTHOUGH MATERIAL IS NON-FLAMMABLE, KEEP CONTAINER COOL WITH WATER SPRAY IF FIRE OCCURS.			
Special Fire Fighting Procedures WEAR SELF CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE AND PROTECTIVE CLOTHING WHILE FIGHTING CHEMICAL FIRES.			
Unusual Fire and Explosion Hazards NONE KNOWN.			

TRW-01374

Man-GILL CHEMICAL COMPANY

MATERIAL SAFETY DATA SHEET

*IRCO RINSE 32807

52807

Section V — Reactivity Data

STABILITY	Unstable	Conditions to Avoid
	Stable *	NONE KNOWN

INCOMPATIBILITY (Materials to Avoid)

ORGANICS, REDUCING AGENTS

Hazardous Decomposition Products

OXIDES OF CHROMIUM

HAZARDOUS POLYMERIZATION	May Occur	Conditions to Avoid
	Will Not Occur *	NONE

Section VI — Health Hazard Data

Effects of Overexposure: SPLASHES CAN CAUSE SKIN BURNS OR SEVERE EYE DAMAGE. INHALATION MAY CAUSE RESPIRATORY TRACT IRRITATION.

Emergency and First Aid Procedures

Eye (Contact): FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES AND CONTACT PHYSICIAN IMMEDIATELY.

Skin (Contact): FLUSH WITH WATER FOR 15 MINUTES. CONTACT PHYSICIAN IF IRRITATION PERSISTS.

Ingestion (Swallowing): DRINK LARGE QUANTITIES OF MILK OR WATER. CONSULT PHYSICIAN IMMEDIATELY.

Inhalation (Breathing): REMOVE TO FRESH AIR.

Section VII — Precautions for Safe Handling & Use

Steps to be taken in Case Material is Released or Spilled

CONTAIN SPILL AND RECOVER CLEAN MATERIAL. NEUTRALIZE WITH MILD CAUSTIC.

Waste Disposal Method: DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.

Precautions To be Taken in Handling and Storage: KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE. STORE IN COOL, CLEAN, DRY LOCATION. AVOID BREATHING DUST, SPRAY OR MIST. STORE ONLY IN WELL VENTILATED AREAS. STOCK SHOULD BE ROTATED.

Other Precautions: SHOWERS AND EYE WASH FOUNTAINS SHOULD BE MADE AVAILABLE WHERE CHEMICALS ARE USED.

Section VIII — Control Measures

Respiratory Protection (Specify Type)

USE NIOSH APPROVED EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED.

Ventilation	Local	RECOMMENDED TO MAINTAIN BELOW TLV
	Mechanical	

Protective Gloves
NEOPRENE RUBBER

Eye Protection
SPLASH GOGGLES OR FACE SHIELD

Other Protective Clothing or Equipment

PROTECTIVE CLOTHING SUFFICIENT TO PREVENT SKIN CONTACT.

Work/Hygienic Practices

WASH THOROUGHLY BEFORE EATING, SMOKING OR USING TOILET FACILITIES.

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF SELLER'S KNOWLEDGE. HOWEVER, SELLER MAKES NO WARRANTY WHATSOEVER, EXPRESSED, IMPLIED OR OF MERCHANTABILITY REGARDING THE ACCURACY OF SUCH DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF. SELLER ASSUMES NO RESPONSIBILITY FOR INJURY TO BUYER OR TO THIRD PERSONS OR FOR ANY DAMAGE TO ANY PROPERTY AND BUYER ASSUMES ALL SUCH RISK.

where do
re store?
MAIN and 7600 M

SECTION I

SECTION II - HAZARDOUS INGREDIENTS

SECTION III - PHYSICAL DATA (on concentrate)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

19465 (page 1 of 2)

0908-2748

SECTION V - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE - Conditions to avoid Eyes - may cause irritation. Ingestion - may cause gastrointestinal discomfort.		THRESHOLD LIMIT VALUE 1000 ppm
		PERMISSIBLE EXPOSURE LIMIT
		OTHER LIMIT N.A.
PRIMARY ROUTES OF ENTRY Inhalation <input type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Other (specify)		
EMERGENCY AND FIRST AID PROCEDURES Eyes - flush with water. Call physician if irritation persists. Ingestion - give water or milk. Call physician.		

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE	<input checked="" type="checkbox"/>	CONDITIONS TO AVOID Heat
	STABLE	<input type="checkbox"/>	
INCOMPATIBILITY (materials to avoid) None			
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon formed upon combustion.			
HAZARDOUS POLYMERIZATION	MAY OCCUR	<input type="checkbox"/>	CONDITIONS TO AVOID None
	WILL NOT OCCUR	<input checked="" type="checkbox"/>	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Remove sources of flame, spark or heat. Provide adequate ventilation. Wipe or mop up spills, then wash with a cleaner.	
WASTE DISPOSAL METHOD Do not puncture or incinerate containers. Replace cap and discard in trash.	
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs) None	
RCRA HAZARDOUS WASTE NO. (40 CFR 261.33) None	
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water) None	<input type="checkbox"/> Theoretical _____ lb/gal <input type="checkbox"/> Analytical _____ lb/gal

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) None required.		
VENTILATION	LOCAL EXHAUST (specify rate) Hood or fan.	SPECIAL N.A.
	MECHANICAL (general) (specify rate) Maintain adequate ventilation.	OTHER N.A.
PROTECTIVE GLOVES (specify type) None required.	EYE PROTECTION (specify type) Safety glasses.	
OTHER PROTECTIVE EQUIPMENT None required.		

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Caution - keep out of reach of children. Contents under pressure. Store in a dry, cool area. Store below 130°F.	
OTHER PRECAUTIONS Read entire label before using.	

JUN - 5 1992


McGean-Rohco, Inc.

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

#13545

**MATERIAL SAFETY
DATA SHEET**

Product Name: Interlox Accelerator 110		Emergency Phone No.: *(313) 872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, MI 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 10-21-89	Revised Date:

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
None Listed By OSHA	NA	NA	NA	No

PHYSICAL DATA

Boiling Point: 220°F	Freezing Point: 30°F	Specific Gravity: 1.15	pH: Solution 10-11
Vapor Pressure at 20° C: As Water	Vapor Density (Air = 1): As Water	% Volatiles by Volume: Zero	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) As Water		Solubility in Water: 100%	
Appearance and Form: Colorless Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: None	Flammable Limits in Air: Upper: NA Lower:
Test Method: NA	% By Volume
Extinguishing Media: NA	
Special Fire Fighting Procedures: NA	
Unusual Fire and Explosion Hazards: NA	
DOT Classification: Not Regulated	Note: UK = Unknown NA = Not Applicable

* AFTER 5:00 PM, CALL EITHER 559-2775 OR 455-4587

0908-2750

TRW-01378

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body:

Mild skin and severe eye irritant.

Emergency and First Aid Procedures:

Flush skin and eyes with cool water.

If eye contact is made flush with water for at least 15 minutes and seek medical attention if irritation persists.

REACTIVITY DATA

☒ Stable☐ Unstable

Conditions to Avoid:

Incompatibility — Materials to Avoid:

Strong Acids

Hazardous Decomposition Products:

None

Hazardous Polymerization:

☐ May Occur☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills:

Flush to sewer with water.

Waste Disposal Methods:

Dispose as mild detergent. Neutralize to neutral pH.

DISPOSER MUST COMPLY WITH FEDERAL, STATE, AND LOCAL DISPOSAL LAWS.

SPECIAL PROTECTION INFORMATION

Respirator:

None Required

Ventilation:

Mechanical-Normal Rate

Gloves:

Neoprene

Eye and Face:

Goggles

Other:

None

Handling and Storage:

Store in cool dry area.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.

APPROVED

EXPERIMENTAL DATA SHEET

13362

JUL 1980
ENVIRONMENTAL
ENGINEERING**McGean-Rohco, Inc.**

1250 Terminal Tower, Cleveland, Ohio 44113, 216/621-6425

**MATERIAL SAFETY
DATA SHEET**

Product Name: INTERLOX BLACK KOTE PF		Emergency Phone No.: *313/872-1800
Plant Address: 38521 Schoolcraft Avenue, Livonia, Michigan 48150		Chemtrec Phone No. 800/424-9300
Prepared By: M. Arthur Detrisac	Issue Date: 1-7-86	Revised Date:

INGREDIENTS AND HAZARDOUS COMPONENTS

Material	%	TLV	C.A.S. #	Suspect Carcinogen
ETHYLENE GLYCOL MONO BUTYL ETHER	10	25 ppm	111-76-2	No
DIMETHYLETHANOLAMINE	<5	NA	108-01-0	No

PHYSICAL DATA

Boiling Point: 212-340°F	Freezing Point: 32°F	Specific Gravity: 1.18	pH: 8.5-9.5
Vapor Pressure at 20°C: As water	Vapor Density (Air = 1): As water	% Volatiles by Volume: 65	Odor: Bland
Evaporation Rate (Butyl Acetate = 1) As H₂O		Solubility in Water: 100%	
Appearance and Form: Black Liquid			

FIRE AND EXPLOSION HAZARD DATA

Flash Point: 143°F	Flammable Limits in Air: Upper: % By Volume Lower: 1.1
Test Method: SETA Flash	
Extinguishing Media: CO₂, Foam, dry chemical, water fog.	
Special Fire Fighting Procedures: Use water to cool closed containers.	
Unusual Fire and Explosion Hazards: Closed containers may explode if exposed to exteme heat.	
DOT Classification: Combustible Liquid NA 1993	Note: UK = Unknown NA = Not Applicable

AFTER 5:00 PM, CALL EITHER 559-2775 OR 455-1587

TRW-01380

0908-2752

HEALTH HAZARD DATA

Effects of Overexposure and Primary Entries to Body: Inhalation: Anesthetic. Irritation of the respiratory tract or acute nervous depression characterized by headache, dizziness, staggering gait, confusion, unconsciousness or coma.
Eye Contact: Primary irritation. Skin Contact: Primary irritation.

Emergency and First Aid Procedures: Inhalation: Remove to fresh air. Restore breathing. Treat symptomatically. Consult physician. Splash (eyes): Flush immediately with large amounts of water for at least 15 minutes. Take to physician for medical treatment. Splash (skin): Wash affected areas with soap and water. Remove contaminated clothing. Consult physician if irritation persists. Ingestion: Drink 1 or 2 glasses of water to dilute. Do not induce vomiting. **REACTIVITY DATA** Consult physician or poison control center immediately.

☒ Stable ☐ Unstable Conditions to Avoid:

Incompatibility — Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: CO, CO₂, oxides of nitrogen.

Hazardous Polymerization: ☐ May Occur ☒ Will Not Occur

SPILL OR LEAK PROCEDURES

Spills: Dike area to contain spill. Avoid breathing vapors. Recover free liquid by addition of inert absorbent to spill. Clean up area and place material in a suitable disposal container using non-sparking tools.

Waste Disposal Methods: Disposal must be made in accordance with local, state and federal disposal laws. Incineration or landfilling must be in an approved facility. Do not incinerate closed containers.

SPECIAL PROTECTION INFORMATION

Respirator: None required if adequate ventilation used.

Ventilation: Local-normal rate.

Gloves: Rubber	Eye and Face: Goggles	Other: Rubber apron
-------------------	--------------------------	------------------------

Handling and Storage: Do not store above 120°F. Store away from high heat, sparks or open flame. Avoid skin and eye contact. Avoid prolonged or repeated breathing of vapors or mist.

THIS PRODUCT SAFETY DATA SHEET IS OFFERED SOLELY FOR YOUR INFORMATION, CONSIDERATION AND INVESTIGATION.

McGEAN-ROHCO, INC. PROVIDES NO WARRANTIES, EITHER EXPRESS OR IMPLIED, AND ASSUMES NO RESPONSIBILITY FOR ACCURACY OR COMPLETENESS OF THE DATA CONTAINED HEREIN.



Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745

EMERGENCY 24 HOUR CHEMTREC NO. 800-424-9300

MATERIAL SAFETY DATA SHEET

51800

Section I

Identity IRCO BOND 51800 DI	Date Printed 07/21/88	Date Revised 07/01/88
NFPA CODE: HEALTH: 2	FLAMMABILITY: 0	REACTIVITY: 0

Section II - Hazardous Ingredients

Hazardous Ingredients	CAS #	Health Hazards	ACGIH TLV-TWA
PHOSPHORIC ACID	7664-38-2	CORROSIVE	1 MG/CUM
SOLUBLE NICKEL	7440-02-0	SUSPECT CANCER	0.1 MG/CUM
NIARC MONOGRAPHS			
ZINC NITRATE	7779-80-6	OXIDIZER	

Section III - Physical/Chemical Characteristics

Boiling Point	NOT DETERMINED	Specific Gravity(H ₂ O=1)	1.65
Vapor Pressure(mm Hg)	NOT DETERMINED	Percent Volatile By Volume (%)	NOT DETERMINED
Vapor Density (AIR=Reference)	NOT DETERMINED	Evaporation Rate (Ether=Reference)	SLOWER
Water Soluble	YES		

Appearance and Odor
LIGHT GREEN LIQUID WITH NO ODOR

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL
NOT FLAMMABLE	NOT APPLICABLE		
Extinguishing Media	ALTHOUGH MATERIAL IS NON-FLAMMABLE, KEEP CONTAINER COOL WITH WATER SPRAY IF FIRE OCCURS.		
Special Fire Fighting Procedures	WEAR SELF CONTAINED BREATHING APPARATUS WITH FULL FACE PIECE AND PROTECTIVE CLOTHING WHILE FIGHTING FIRES.		
Unusual Fire and Explosion Hazards	NONE KNOWN		

Section V - Reactivity Data

STABILITY	Unstable	Conditions to Avoid
	Stable	NONE KNOWN

TRW-01382

METAL PROCESSING SYSTEMS

0207300-00 TRW FASTENERS DIVISION

0908-2754



Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745
EMERGENCY 24 HOUR CHEMTREC NO. 800-424-9300

MATERIAL SAFETY DATA SHEET

IRCO BOND 51888 DIP

51800

Section V - Reactivity Data Cont.

INCOMPATIBILITY (Materials to Avoid)
REDUCING AGENTS AND ALKALINE MATERIALS

Hazardous Decomposition Products
OXIDES OF NITROGEN AND PHOSPHORUS

HAZARDOUS POLYMERIZATION	May Occur Will Not Occur X	Conditions to Avoid NONE
-----------------------------	-------------------------------	-----------------------------

Section VI - Health Hazard Data

Effects of Overexposure
DAMAGE. HARMFUL IF SWALLOWED. SPLASHES CAN CAUSE SKIN BURNS OR SEVERE EYE

Emergency and First Aid Procedures

Eye (Contact):
AND CONTACT PHYSICIAN IMMEDIATELY. FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES

Skin (Contact):
IRRITATION PERSISTS. FLUSH WITH WATER FOR 15 MINUTES. CONTACT PHYSICIAN IF

Ingestion (Swallowing):
PHYSICIAN IMMEDIATELY. DRINK LARGE QUANTITIES OF MILK OR WATER. CONSULT

Inhalation (Breathing):
REMOVE TO FRESH AIR.

Section VII - Precautions for Safe Handling & Use

Steps to be taken in Case Material is Released or Spilled
CONTAIN SPILL AND RECOVER CLEAN MATERIAL. NEUTRALIZE WITH MILD CAUSTIC.

Waste Disposal Method:
FEDERAL REGULATIONS. DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND

Handling and Storage
STORE IN COOL, CLEAN, DRY LOCATION. STOCK SHOULD BE ROTATED. STORE AWAY FROM
ALKALIS. STORE ONLY IN WELL VENTILATED AREAS. STORE ABOVE FREEZING

Other Precautions
AVAILABLE WHERE CHEMICALS ARE USED. SHOWERS AND EYE WASH FOUNTAINS SHOULD BE MADE

Section VIII - Control Measures

Respiratory Protection (Specify Type)
USE NIOSH APPROVED EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED.

VENTILATION	Local	RECOMMENDED TO MAINTAIN BELOW TLV
	Mechanical	

TRW-01383

METAL PROCESSING SYSTEMS



Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 800-328-9745
EMERGENCY 24 HOUR CHEMTREC NO. 800-424-9300

MATERIAL SAFETY DATA SHEET

IRCO BOND 51800 DIP

51800

Section VIII - Control Measures Cont.

Protective Gloves

NEOPRENE RUBBER

Eye Protection

SPLASH GOGGLES OR FACE SHIELD

Other Protective Clothing or Equipment

PROTECTIVE CLOTHING SUFFICIENT TO PREVENT SKIN CONTACT.

Work/Hygienic Practices

WASH THOROUGHLY BEFORE EATING, SMOKING OR USING TOILET FACILITIES

TRW-01384

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF THE SELLER'S KNOWLEDGE, HOWEVER, THE SELLER MAKES NO WARRANTY WHATSOEVER, EXPRESSED, IMPLIED, OR OF MERCHANTABILITY REGARDING THE ACCURACY OF SUCH DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF, THE SELLER ASSUMES NO RESPONSIBILITY FOR INJURY TO THE BUYER OR TO THE THIRD PARTY PERSONS OR FOR ANY DAMAGE TO ANY PROPERTY AND BUYER ASSUMES ALL SUCH RISK.

METAL PROCESSING SYSTEMS

0207000-00 TRW FASTENERS DIVISION

0908-2756

Not used any more

Was used in 715

Man-GILL CHEMICAL COMPANY

23000 ST. CLAIR AVE. • CLEVELAND, OHIO 44117 • 216 - 486-5300 • CHEMTREC 800 - 424-9300



MATERIAL SAFETY DATA SHEET

Section I				53708	
Identity		Date Prepared	02/25/86	Date Revised	02/21/86
*TRCO SEAL 53708 OLIVE DRAB		NFPA CODE HEALTH:	3	FLAMMABILITY	3
				REACTIVITY	
Section II — Hazardous Ingredients					
Hazardous Ingredients	CAS #	Health Hazards	ACGIH TLV - TWA		
BUTYL CELLOSOLVE (2-BUTOXYETHANOL)	111-76-2	SKIN	120 MG/CM ³		
FORMALDEHYDE	50-00-0	*SUSPECT CANCER	1.5 MG/CM ³		
*IARC MONOGRAPHS CHROMATE COMPOUNDS		AS OR	2.05 MG/CM ³		
ETHANOL (ETHYL ALCOHOL)	64-17-5		1900 MG/CM ³		
ETHYL ACETATE	141-78-6		1400 MG/CM ³		
HEXONE (MIBK)	108-10-1		205 MG/CM ³		
LEAD COMPOUND	7439-92-1	DUST AS PD	.25 MG/CM ³		
MAGNESIUM SILICATE (TPLO)	14807-96-6	DUST	3 MG/CM ³		
Section III — Physical/Chemical Characteristics					
Boiling Point		Specific Gravity (H ₂ O = 1)			
165-274 DEG F		1.11			
Vapor Pressure (mm Hg)		Percent Volatile By Volume (%)			
N/D		66			
Vapor Density (AIR = Reference)		Evaporation Rate (Ether = Reference)			
HEAVIER		SLOWER			
Water Soluble					
NO					
Appearance and Odor					
OLIVE LIQUID, MILD ODOR					
Section IV — Fire and Explosion Hazard Data					
Flash Point (Method Used)		Flammable Limits		LEL	UEL
75 DEG F TCC		LOWEST VALUE		1.2	
Extinguishing Media					
CARBON DIOXIDE, DRY CHEMICAL.					
Special Fire Fighting Procedures		IF EXPOSED TO HEAT, PRESSURE WILL BUILD UP IN CONTAINER.			
Unusual Fire and Explosion Hazards		A STRAIGHT WATER STREAM WOULD SPREAD FIRES. STATIC ELECTRICITY COULD CAUSE IGNITION.			

TRW-01385

0908-2757

0007300-00 TRW PREPARED

Man-GILL CHEMICAL COMPANY

MATERIAL SAFETY DATA SHEET

*IRCO SEAL 33728 OLIVE DRAB

33728

Section V — Reactivity Data

STABILITY	Unstable Stable *	Conditions to Avoid
AVOID PROLONGED STORAGE AT ELEVATED TEMPERATURE		
INCOMPATIBILITY (Materials to Avoid)		
STRONG OXIDIZERS, ALKALINE MATERIAL		
Hazardous Decomposition Products		
OXIDES OF CARBON, ANHYDRIDES		
HAZARDOUS POLYMERIZATION	May Occur Will Not Occur *	Conditions to Avoid
NONE		

Section VI — Health Hazard Data

Effects of Overexposure	MILD SKIN IRRITANT. HARMFUL IF SWALLOWED. IRRITATING TO THE EYES. INHALATION MAY CAUSE HEADACHE, NAUSEA, AND DIZZINESS.
Emergency and First Aid Procedures	
Eye (Contact):	FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR 15 MINUTES AND CONTACT PHYSICIAN IMMEDIATELY.
Skin (Contact):	WASH WITH SOAP AND WATER. CONTACT PHYSICIAN IF IRRITATION PERSISTS.
Ingestion (Swallowing):	DRINK LARGE QUANTITIES OF MILK OR WATER. CONSULT PHYSICIAN IMMEDIATELY.
Inhalation (Breathing):	REMOVE TO FRESH AIR.

Section VII — Precautions for Safe Handling & Use

Steps to be taken in Case Material is Released or Spilled	CONTAIN SPILL, ABSORB AND DISPOSE WASTE
Waste Disposal Method:	DISPOSE IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS.
Precautions To be Taken in Handling and Storage	DO NOT STORE OR USE NEAR HEAT, SPARKS, OR FLAME. DO NOT STORE NEAR COMBUSTIBLE MATERIAL. DO NOT STORE IN DIRECT SUNLIGHT. WHEN SANDING DRY FILM, USE NIOSH APPROVED DUST MASK. KEEP CONTAINER TIGHTLY CLOSED WHEN NOT IN USE.
Other Precautions:	SHOWERS AND EYE WASH FOUNTAINS SHOULD BE MADE AVAILABLE WHERE CHEMICALS ARE USED.

Section VIII — Control Measures

Respiratory Protection (Specify Type)		
USE NIOSH APPROVED EQUIPMENT WHEN AIRBORNE EXPOSURE LIMITS ARE EXCEEDED.		
Ventilation	Local	RECOMMENDED TO MAINTAIN BELOW TLV
	Mechanical	
Protective Gloves		Eye Protection
NEOPRENE RUBBER		SPLASH GOGGLES OR FACE SHIELD
Other Protective Clothing or Equipment		
PROTECTIVE CLOTHING SUFFICIENT TO PREVENT SKIN CONTACT.		

Work/Hygienic Practices	WASH THOROUGHLY BEFORE EATING, SMOKING OR USING TOILET FACILITIES.
THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND IS ACCURATE TO THE BEST OF SELLER'S KNOWLEDGE, HOWEVER, SELLER MAKES NO WARRANTY WHATSOEVER, EXPRESSED, IMPLIED OR OF MERCHANTABILITY REGARDING THE ACCURACY OF SUCH DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF, SELLER ASSUMES NO RESPONSIBILITY FOR INJURY TO BUYER OR TO THIRD PERSONS OR FOR ANY DAMAGE TO ANY PROPERTY AND BUYER ASSUMES ALL SUCH RISK.	

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

REVISED

JANUARY 7, 1987

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME ENVIRONMENTAL SPECIALTIES CORPORATION		EMERGENCY TELEPHONE NO. (401) 781-6770
ADDRESS (Number, Street, City, State, and ZIP Code) 860 EDDY STREET, PROVIDENCE, RI 02905		
CHEMICAL NAME AND SYNONYMS INDUSTRIAL SOLVENT CLEANER		TRADE NAME AND SYNONYMS ISC-108 CAS#06264
CHEMICAL FAMILY LIQUID ALKALI CLEANING COMPOUND	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
SOLVENTS 1,1,1, TRICHLOROETHANE	0.4%	350	FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
NOT APPLICABLE					

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212	SPECIFIC GRAVITY (H ₂ O=1)	1.015
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	90%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (H ₂ O = 1)	1.0
SOLUBILITY IN WATER	INFINITE	pH 2% SOLUTION	9.45
APPEARANCE AND ODOR GREEN, MILD SOLVENT LIKE ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NONE	FLAMMABLE LIMITS	LeI	UeI
		NONE		
EXTINGUISHING MEDIA	NONE			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	NOT APPLICABLE
EFFECTS OF OVEREXPOSURE	NONE
EMERGENCY AND FIRST AID PROCEDURES	
SKIN: MILDLY DEFATTING. WASH OFF WITH WATER.	
APPLY EMOLLIENT. IN CASE OF ANY IRRITATION, GET MEDICAL ATTENTION. EYES: WASH	
WITH WATER 10-15 MINUTES. SEEK MEDICAL ATTENTION. INGESTION: GET MEDICAL ATTENTION.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) ALL ACIDS, STRONG OXIDIZERS			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
WASH DIRECTLY TO SEWER WITH PLENTY OF WATER	
WASTE DISPOSAL METHOD	
NEUTRALIZATION OF ALKALINITY WITH WASTE ACIDS.	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) SIMPLE MASK			
VENTILATION	LOCAL EXHAUST	SPECIAL	
	MECHANICAL (General)	SIMPLE FAN	OTHER
PROTECTIVE GLOVES RUBBER GLOVES		EYE PROTECTION SAFETY GOGGLES	
OTHER PROTECTIVE EQUIPMENT COVERALLS			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
STORE AT ROOM TEMPERATURE BETWEEN 40-90 DEGREES FARENHEIT. PLEASE DO NOT LET FREEZE.	
OTHER PRECAUTIONS NONE	

DISCUSSION OF O.S.H.A. - 20 FORMULA

This formula contains 1,1,1, - Trichloroethane (TRI) as a solvent and is listed in Section II Hazardous Ingredients.

It is shown as 0.4% by weight and a TLV of 350 units.

This small content amount should not be ignored or overlooked, but explained in detail to proper concerned personnel.

1. All vapor pressure and TLV information of TRI as we now know is based on data where TRI is used in a 100% pure organic solvent state.

2. When TRI is mixed with other chemicals, its evaporation properties are affected by the type of physical mixture formed.

One possible mixture is ISC-108

3. The TLV of the TRI in ISC-108 cannot be measured in a laboratory or estimated properly because it cannot be evaporated out of its water phase.

4. The reason it cannot be evaporated out of its water phase is that TRI is physically coupled into water with other organic and inorganic materials, and forms a stable single phase solution with a vapor pressure of its own.

5. The actual vapor pressure formed is from the ISC-108 compound and is about the same as for water at the same volume, temperature, exposed surface area, ventilation rate, etc.

6. Any TLV for TRI cannot be estimated or calculated that would be meaningful with this unique stable single phase product.

7. "Not applicable" should be listed on page 2, Section V Health Hazard Data as the threshold limit value because of the above reasons.

APPROVED

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

APR 27 1987

MATERIAL SAFETY DATA SHEET

REVISED

JANUARY 1987

ENVIRONMENTAL
ENGINEERING

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME ENVIRONMENTAL SPECIALTIES CORPORATION		EMERGENCY TELEPHONE NO. (401) 781-6770
ADDRESS (Number, Street, City, State, and ZIP Code) 860 EDDY STREET PROVIDENCE, RI 02905		
CHEMICAL NAME AND SYNONYMS INDUSTRIAL CLEANER		TRADE NAME AND SYNONYMS ISC-108AA
CHEMICAL FAMILY LIQUID ALKALI CLEANING COMPOUND		FORMULA

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	NONE		BASE METAL	NONE	
CATALYST	"		ALLOYS	"	
VEHICLE	"		METALLIC COATINGS	"	
SOLVENTS	"		FILLER METAL PLUS COATING OR CORE FLUX	"	
ADDITIVES	"		OTHERS	"	
OTHERS	"			"	
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212 F.	SPECIFIC GRAVITY (H ₂ O=1)	1.01
VAPOR PRESSURE (mm Hg)	N/A	PERCENT VOLATILE BY VOLUME (%)	OVER 90%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (H ₂ O = 1)	1.0
SOLUBILITY IN WATER	INFINITE	pH AS DELIVERED	10.8
APPEARANCE AND ODOR			

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NONE	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	NONE			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

TRW-01390

SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	NOT APPLICABLE
EFFECTS OF OVEREXPOSURE	NONE
EMERGENCY AND FIRST AID PROCEDURES	
SKIN: MIDLY DEFATTING. WASH OFF WITH WATER. APPLY LOTION. IN CASE OF IRRITATION GET MEDICAL ATTENTION. EYES: WASH WITH WATER FOR FIFTEEN MINUTES. SEEK MEDICAL ATTENTION. INGESTION: GET MEDICAL ATTENTION.	

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid) ALL ACIDS, STRONG OXIDIZERS.			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED	
WASH DIRECTLY TO SEWER WITH PLENTY OF WATER.	
WASTE DISPOSAL METHOD	
NEUTRALIZATION OF ALKALINITY WITH WASTE ACIDS.	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) SIMPLE MASK			
VENTILATION	LOCAL EXHAUST	SPECIAL	
	MECHANICAL (General) X	OTHER	
PROTECTIVE GLOVES	RUBBER GLOVES	EYE PROTECTION	GOGGLES
OTHER PROTECTIVE EQUIPMENT COVERALLS			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	
STORE AT ROOM TEMPERATURE BETWEEN 40 - 90 DEGREES FARENHEIT.	
OTHER PRECAUTIONS NONE	

MATERIAL SAFETY DATA SHEET

REVISED

MAY 15, 1987

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME ENVIRONMENTAL SPECIALTIES CORPORATION		EMERGENCY TELEPHONE NO. (401) 781-6770
ADDRESS (Number, Street, City, State, and ZIP Code) 860 EDDY STREET PROVIDENCE, RI 02905		
CHEMICAL NAME AND SYNONYMS INDUSTRIAL SOLVENT CLEANER		TRADE NAME AND SYNONYMS ISC-108 B
CHEMICAL FAMILY LIQUID ALKALI CLEANING COMPOUND	FORMULA	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS NONE			BASE METAL NONE		
CATALYST "			ALLOYS "		
VEHICLE "			METALLIC COATINGS "		
SOLVENTS "			FILLER METAL PLUS COATING OR CORE FLUX "		
ADDITIVES "			OTHERS "		
OTHERS "					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
TETRAHYBROFURFURYLALCOHOL - CAS #97-99-4				LESS THAN	10
ISOPROPHYL ALCOHOL - CAS #67-63-0				LESS THAN	10
DIEETHYLENE GLYCOL METHYL ETHER - CAS #111-77-3				LESS THAN	10
POTASSIUM HYDROXIDE - CAS #1310-58-3				LESS THAN TWO TENTHS OF 1%	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	212° F.	SPECIFIC GRAVITY (H ₂ O=1)	1.01
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT VOLATILE BY VOLUME (%) OVER	90%
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (H ₂ O = 1)	1.0
SOLUBILITY IN WATER	INFINITE	pH AS DELIVERED	10.5
APPEARANCE AND ODOR	GREEN LIQUID MILD ODOR		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	NONE	FLAMMABLE LIMITS	LeI	UeI
EXTINGUISHING MEDIA	NONE			
SPECIAL FIRE FIGHTING PROCEDURES	NONE			
UNUSUAL FIRE AND EXPLOSION HAZARDS	NONE			

Lab 731

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME LaMotte Chemical Products Company		EMERGENCY TELEPHONE NO. 301-773-3100
ADDRESS (Number, Street, City, State, and ZIP Code) P.O. Box 329, Chestertown, Maryland 21620		
CHEMICAL NAME AND SYNONYMS Isopropanol		TRADE NAME AND SYNONYMS Isopropyl alcohol (Code 8745)
CHEMICAL FAMILY Alcohol	FORMULA CH ₃ CHOHCH ₃	(6133)

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
CATALYST			ALLOYS		
VEHICLE	N/A		METALLIC COATINGS	N/A	
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES		%	TLV (Units)
Isopropanol	CAS #67-63-0	99%	

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	176°F	SPECIFIC GRAVITY (H ₂ O=1)	0.8
VAPOR PRESSURE (mm Hg.) at 20°C	33	PERCENT VOLATILE BY VOLUME (%)	99.9992
VAPOR DENSITY (AIR=1)	2.1	EVAPORATION RATE (Butyl Acetate = 1)	2.93
SOLUBILITY IN WATER	∞		

APPEARANCE AND ODOR: clear, colorless liquid; characteristic alcohol odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	53°F (closed cup)	FLAMMABLE LIMITS	LeL: 2% UeL: 12%
EXTINGUISHING MEDIA: Dry chemical, CO ₂ extinguishers, water spray			
SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to keep fire-exposed containers cool, disperse vapors, flush spills away and dilute spills to non-flammable mixture.			
UNUSUAL FIRE AND EXPLOSION HAZARDS: Can be ignited at almost all temperatures.			

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

TXDS: orl-hmn LDLo:237/mg/kg ihl-hmn TCLO:400 ppm

EFFECTS OF OVEREXPOSURE

Breathing vapors may cause headaches, dizziness, and nausea.

Moderately toxic.

EMERGENCY AND FIRST AID PROCEDURES

Eye contact - immediately flush thoroughly with water for 15 min., consult a physician.

External - flush with water and wash with soap and water.

Internal - induce vomiting, call a physician immediately.

SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	Anhydride, Isocyanate, monomer, and organometallic contamination
INCOMPATIBILITY (Materials to avoid)			Keep away from sources of ignition. Oxidizing materials
HAZARDOUS DECOMPOSITION PRODUCTS			
N/A			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all sources of ignition. Absorb on paper. Evaporate to dryness on an iron pan in a hood. Burn the paper.

WASTE DISPOSAL METHOD

In accordance with local regulations. Normally, wash small quantities down drain with excess water; atomize large quantities into an incinerator.

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

none

VENTILATION

LOCAL EXHAUST

recommended

SPECIAL

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

none

EYE PROTECTION

safety glasses or goggles

OTHER PROTECTIVE EQUIPMENT

none

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Protect from physical damage. Keep away from heat and sources of ignition.

Use adequate ventilation. Do not use with aluminum.

OTHER PRECAUTIONS

JUN 25 1985



PETERSON STEEL CORPORATION

61 WEST MOUNTAIN ST., WORCESTER, MA 01606 • PHONE Area Code (508) 853-3630

Emergency Phone Number: (508) 853-3630

Issue Date: February 27, 1985

MATERIAL SAFETY DATA SHEET

TRADE NAME (Common or Synonym):
CHEMICAL NAME:

Ductile Irons and Gray Irons
Iron

1. INGREDIENTS

Material or Compound	CAS Number	% Weight	EXPOSURE LIMITS	
			OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
Iron (Fe)	7439-89-6	Remainder	10 (Fume)	5 (Fume)
Carbon (C)	7440-44-0	2.5 - 4.3	15	10
Chromium (Cr)	7440-47-3	0.01 - 2.0	0.1	0.5
Copper (Cu)	7440-50-8	0.01 - 1.5	0.1 (fume) 1 (dust)	0.2 (fume) 1 (dust)
Manganese (Mn)	7439-96-5	0.01 - 2.0	5	1 (fume) 5 (dust)
Nickel (Ni)	7440-02-0	0.01 - 3.0	1	1
Silicon (Si)	7440-21-3	1.0 - 4.0	None Listed	10

NOTE: The above listing is a summary of the principle elements. Various grades of iron will contain varying amounts or combinations of these elements. Other elements may also be present in minute amounts.

2. PHYSICAL DATA

Material is (at normal conditions): <input type="radio"/> LIQUID <input checked="" type="radio"/> SOLID <input type="radio"/> GAS <input type="radio"/> OTHER	Vapor Density: N/A	Specific Gravity (H ₂ O = 1): Approximately 8
	Acidity/Alkalinity: pH - N/A	Solubility in Water (% by weight): N/A
Appearance and Odor: Silvery-Grey, Odorless	Melting Point (approximate): 2400 - 2800° F	Vapor Pressure (mm Hg @ 20° C): N/A
% Volatile By Volume: N/A	Boiling Point: N/A	

3. PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection:

Appropriate dust/mist/fume respirator should be used to avoid excessive inhalation of particulates. If exposure limits are reached or exceeded, use NIOSH approved equipment.

Eyes and Face:

Safety glasses should be worn when grinding or cutting. Face shield should be worn when welding or cutting.

Hands, Arms and Body:

Protective gloves should be worn as required for welding, burning or handling operations.

Other Clothing and Equipment:

As required depending upon operations and safety codes.

4. EMERGENCY MEDICAL PROCEDURES

Inhalation:

Remove to fresh air. If conditions continue, consult a physician.

Eye Contact:

Flush thoroughly with running water to remove particulate. Obtain medical attention.

Skin Contact:

Remove particles by washing thoroughly with soap and water. Seek medical attention if condition persists.

Ingestion:

If significant amounts of metal are ingested, consult a physician.

5. HEALTH AND SAFETY INFORMATION

HEALTH

Iron products in their solid state present no inhalation, ingestion, or contact health hazard. Operations such as burning, welding, sawing, brazing, grinding, and machining, which result in elevating the temperature of the product to, or above its melting point, or result in the generation of airborne particulates may present hazards. The major exposure hazard is inhalation. Effects or overexposure to fume and dust are as follows:

Acute:

Excessive inhalation of metallic fumes and dust may result in irritation of eyes, nose and throat. High concentrations of fumes and dust of iron-oxide manganese, copper, zinc and lead may result in metal fume fever. Typical symptoms last from 12 to 48 hours and consist of a metallic taste in the mouth, dryness and irritation of the throat, chills and fever.

Chronic:

Chronic and prolonged inhalation of high concentrations of fumes or dust of the following elements may lead to the conditions listed opposite the element:

Aluminum:

May initiate fibrotic changes to lung tissue.

Bismuth:

No chronic debilitating symptoms indicated.

Boron:

No chronic debilitating symptoms indicated.

Chromium:

Lesions of the skin and mucous membranes, possible cancer of the nose or lungs-bronchogenic carcinoma.

Copper:

No chronic debilitating symptoms indicated.

Iron:

Siderosis, pulmonary effects. No chronic debilitating symptoms indicated.

Lead:

Anemia, urinary dysfunction, weakness, constipation, nausea, nervous disorder.

Manganese:

Bronchitis, pneumonitis, lack of coordination.

Molybdenum:

Respiratory tract irritation, possible liver and kidney damage, bone deformity.

Nickel:

Lesions of the skin and mucous membranes, possibly cancer of the nose or lungs-bronchogenic carcinoma.

Phosphorous:

Necrosis of the mandible.

Sulfur:

(as Sulfur Dioxide) Edema of the lungs.

Vanadium:

(as Vanadium Pentoxide) Emphysema, pneumonia.

Zinc:

Gastrointestinal inflammation reported in animal studies.

Medical Conditions Aggravated by Exposure: Individuals with chronic respiratory disorders (i.e.: asthma, chronic bronchitis, emphysema, etc.) may be adversely affected by any fume or airborne particulate matter exposure.

Occupational Exposure Limits: See Products Ingredients Section 1. Chromium and Nickel have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

FIRE AND EXPLOSION

Flash Point:

N/A

Auto Ignition Temperature:

N/A

Flammable Limits in Air:

Lower: N/A

Upper: N/A

Extinguishing Media:

For molten metal use dry powder or sand.

Extinguishing Media NOT TO BE USED:

Do not use water on molten metal.

Fire and Explosion Hazards:

Iron products do not present fire or explosion hazards under normal conditions. Fine metal particles such as produced in grinding or sawing can burn. High concentrations of metallic fines in the air may present an explosion hazard.

REACTIVITY

Stability:

- Stable
- Unstable

Incompatibility (Materials to avoid):

Reacts with strong acids to form Hydrogen gas.

Conditions to Avoid:

Iron at temperatures above the melting point may liberate fume containing oxides of iron and alloying elements. Avoid generation of airborne fume and dust.

Hazardous Decomposition Products:

Metallic dust or fumes may be produced during welding, burning, grinding and possibly machining.
Refer to ANSI Z49.1.

6. ENVIRONMENTAL

Spill or Leak Procedures:

Fine turnings and small chips should be swept or vacuumed. Scrap metal can be reclaimed for reuse.

Waste Disposal Method:

Used or unused products should be disposed of in accordance with Federal, State or local laws and regulations.

*Disposer must comply with Federal, State and local disposal or discharge laws.

7. ADDITIONAL INFORMATION

In welding, precautions should be taken for airborne contaminants which may originate from components of the welding rod.

Arc or spark generated when welding or burning could be a source of ignition for combustion and flammable materials.

DISCLAIMER

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.